

# SERVICE MANUAL

STEREO RECEIVER



#### SPECIFICATIONS

<FM tuner section> **Tuning range** Usable sensitivity (IHF) Antenna terminals

87.5 MHz to 108 MHz 16.8 dBf

75 ohms (unbalanced)

Loop antenna

<MW tuner section> **Tuning range** 

531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)  $350 \mu V/m$ 

Usable sensitivity **Antenna** 

<LW tuner section> 144 kHz to 290 kHz **Tuning range** Usable sensitivity  $1400 \mu V/m$ **Antenna** Loop antenna

<Amplifier section> Power output

Total harmonic distortion

Inputs

Front

Rated: 70 W + 70 W (1 kHz/DIN 45500,

T.H.D.1 %, 8 ohms)

Reference: 85 W + 85 W (1 kHz/DIN

45324, T.H.D.10 %, 8 ohms)

Rear (Surround)

Rated: 70 W + 70 W (1 kHz/DIN 45500,

T.H.D.1 %. 8 ohms)

Reference: 85 W + 85 W (1 kHz/DIN

45324, T.H.D.10 %, 8 ohms) DIN MUSIC POWER: 180 W +180 W

Center

Rated: 70 W (1 kHz/DIN 45500,

T.H.D.1 %, 8 ohms)

Reference: 85 W (1kHz/DIN 45324,

T.H.D.10 %, 8 ohms) DIN MUSIC POWER: 180 W 0.1 % (50 W, 1 kHz, 8 ohms, Front)

**AUDIO IN** 

PHONO: 2.5 mV, adjustable

(47 kohms)

VIDEO 1/DVD/MD, VIDEO 2/ LD/TV, VIDEO 3, CD: 300 mV adjustable (47 kohms) TAPE MONITOR: 350 mV, adjustable (47 kohms)

AUX: 300 mV, adjustable (47 kohms)

DIGITAL IN

COAXIAL (VIDEO 2): OPTICAL (VIDEO 1): accept linear PCM signals and bit stream of Dolby Digital and DTS Surround (32 kHz, 44.1 kHz and 48 kHz and 96 kHz)

VIDEO IN: 1 Vp-p (75 ohms)

Outputs AUDIO OUT (REC OUT): 300 mV

(1 kohm)

VIDEO OUT (MONITOR): 1 Vp-p

(75 ohms)

SUPER WOOFER: 1.5 V

FRONT SPEAKERS IMP: 8 ohms: accepts speakers of 8 ohms or more SURROUND SPEAKERS IMP: 8 ohms : accepts speakers of 8 ohms or more CENTER SPEAKERS IMP: 8 ohms: accepts speakers of 8 ohms or more PHONES (stereo jack): accepts

headphones of 32 ohms or more -20 dB

-20 dB

<General>

Muting

**Power requirements** 230 V AC, 50 Hz 185 W

Power consumption

Power consumption in ECO OFF: 35.6 W standby mode ECO ON: 1.3 W Dimensions of main unit 430 x 155 x 402 mm

 $(W \times H \times D)$ 

Weight of main unit 8.7 kg

• Design and specifications are subject to change without notice.

• Manufactured under license from Dolby Laboratories Licensing Corporation.

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• Manufactured under license from Digital Theater System, Inc. US Pat. No. 5,451,942 and other worldwide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater System Inc. ©1996 Digital Theater system, Inc. All rights reserved.

#### ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANF NO.	RI DESCRIPTIO	N	REF. NO	D. PART NO.	KANRI NO.	DESCRIPTION
IC						87-A40-780-080	ZENER, U	
	00 301 000 040		G TG NTMATOON			87-A40-747-080	ZENER, U	
	87-A21-760-040 8B-AR3-602-030		C-IC, NJM4580V C-IC, UPD780228GF	-084		87-A40-752-080 87-A40-764-080	ZENER, U. ZENER, U.	
	87-A21-831-010		IC,SPS-422-1-F1			87-A40-740-080	ZENER, U	
	87-020-784-040		C-IC, TC4053BF	J.		07 740 757 000	ZUMUD II	ZZ EDGG
	87-A21-703-040		C-IC, SN74LV244APN	Y		87-A40-757-080 87-A40-488-080	ZENER,U	
	87-A21-916-040		C-IC, SN74LV125APV	Ñ		87-A40-751-080	ZENER, U	Z6.2BSB
	87-A21-825-040 87-A21-884-030		C-IC,M61501FP C-IC,CS4228A			87-A40-646-010 87-017-149-080	DIODE,F	
	87-017-585-080		C-IC, C54220A C-IC, NJM4580E			07-017-149-000	ZENER, II	ZJOAZI
	87-020-903-010		IC,NJM7805FA			87-A40-744-080	ZENER, U	
	87-A21-883-030		C-IC, CS8415A			87-A40-739-080	ZENER, U	Z2.7BSA
	87-A20-870-010		IC,GP1F37R					
	87-A21-885-030		C-IC, CS49326		MAIN C.B			
	87-A21-695-010 87-A20-820-010		IC, LA1845L IC, BA7625		C6	87-012-195-080	C-CAP.II	100P-50 J CH
			,		C7	87-012-195-080	C-CAP, U	100P-50 J CH
	87-A21-928-010		IC,LC72131D-N		C11	87-012-195-080	,	100P-50 J CH
	87-017-917-080 87-A20-440-040		C-IC,BU4066BCF C-IC,BU1920FS		C12 C101	87-012-195-080 87-010-235-080		100P-50 J CH 70-16 SME
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TRANSISTO	R				C102 C103	87-A12-072-080 87-A12-068-080		00-25 SMG 70-16 SMG
TRANSISTO	IX.				C103	87-A12-076-080		2-35 SMG
	87-026-245-080		TR,DTC114ES		C105	87-A12-072-080		00-25 SMG
	87-A30-612-080 87-A30-476-010		TR,2SC5343Y TR,KTA1046Y		C106	87-A12-091-080	CAP,E 1	0-50 SMG
	87-A30-071-080		C-TR,RT1N 144C		C107	87-A12-080-080	CAP,E 2	20-35 SMG
	89-110-372-080		TR,2SA1037K(R)		C109	87-A10-712-080		0.22-50 ZF
	87-A30-085-040		C-TR, CSA1362GR		C110 C111	87-A10-712-080 87-A10-712-080		0.22-50 ZF 0.22-50 ZF
	89-318-155-080		TR, 2SC1815GR		C112	87-A10-712-080		0.22-50 ZF
	87-026-213-080		C-TR, DTC114YKA		G112	05 310 020 000	GAD E 4	500 OF M OF GG
	89-320-011-080 87-A30-629-010		TR,2SC2001K TR,2SA1931		C113 C114	87-A12-830-000 87-A12-830-000		700-35 M 85 GS 700-35 M 85 GS
			,		C115	87-A10-712-080		0.22-50 ZF
	89-110-155-080		TR, 2SA1015GR		C116	87-A10-712-080		0.22-50 ZF
	87-A30-494-080 87-A30-097-010		TR,2SA1980G TR,FN 1016		C117	87-A10-712-080	C-CAP, S	0.22-50 ZF
	87-A30-107-070		C-TR,CMBT5401		C118	87-A10-712-080		0.22-50 ZF
	87-A30-098-010		TR,FP 1016		C119 C120	87-016-520-090 87-016-520-090		300-65 M SMG 300-65 M SMG
	87-A30-268-040		C-TR, 2SA1514K(S)		C120	87-A12-072-080		00-05 M SMG
	87-A30-075-080		C-TR, 2SA1235F		C122	87-A12-089-080	CAP,E 3	.3-50 SMG
	87-A30-257-080 87-A30-076-080		C-TR,2SD1306E C-TR,2SC3052F		C126	87-A12-091-080	CAP E 1	0-50 SMG
	86-NFZ-667-040		C-TR,DTC123JKA		C127	87-012-286-080		0.01-25
	05 300 406 050		0 mp 000mm====		C129	87-A10-712-080		0.22-50 ZF
	87-A30-106-070 87-A30-087-080		C-TR, CMBT5551 C-FET, 2SK2158		C130 C132	87-A10-712-080 87-010-405-080	C-CAP,S CAP,E 1	0.22-50 ZF 0-50
	87-A30-196-080		TR,2SC4115SRS				/	
	87-A30-086-040 87-A30-484-080		C-TR, CSD1306E C-TR, KRA102S		C135 C136	87-A12-828-000		300-65 M GS 300-65 M GS
	67-A3U-464-U6U		C-1R, RRA1025		C136	87-A12-828-000 87-012-286-080		0.01-25
	87-A30-190-080		TR,CC5551		C203	87-012-368-080	C-CAP,S	0.1-50 ZF
	87-A30-186-010 87-A30-072-080		FET, 2SK3053 C-TR, RT1P 144C		C204	87-012-368-080	C-CAP,S	0.1-50 ZF
	89-327-143-080		TR,2SC27140		C205	87-012-368-080	C-CAP,S	0.1-50 ZF
	87-A30-489-080		C-TR, KRA107S		C206	87-012-368-080	C-CAP,S	0.1-50 ZF
	89-503-602-080		C-FET,2SK360E		C207 C208	87-012-282-080 87-012-282-080	,	4700P-50 4700P-50
	87-A30-234-080		TR,CSC4115BC		C211	87-012-282-080		4700P-50
	89-213-702-010		TR,2SB1370E		C217	87-016-460-080	ר מאם מ	0.22-16 KB
					C217	87-016-460-080		0.22-16 KB
DIODE					C300	87-A11-548-080	C-CAP,S	560P-50 KB
	87-020-465-080		DIODE,1SS133		C3 0 3 C3 0 4	87-012-275-080 87-012-275-080		1200P-50 B 1200P-50 B
	87-A40-749-080		ZENER, UZ5.6BSB		C304	01 012-2/3-000	C-CAF,U	7700E-30 D
	87-A40-755-080		ZENER, UZ7.5BSA		C305	87-A12-090-080		.7-50 SMG
	87-A40-748-080 87-A40-547-090		ZENER, UZ5.6BSA DIODE, D5SBA20		C306 C307	87-A12-090-080 87-010-866-080		.7-50 SMG 0-63 M VX
	J. 1120 J41-030				C308	87-010-866-080		0-63 M VX
	87-A40-269-080		C-DIODE, MC2836		C309	87-A12-092-080		2-50 SMG
	87-A40-270-080 87-A40-768-080		C-DIODE, MC2838 ZENER, UZ16BSA		C310	87-A12-092-080	CAP.E 2	2-50 SMG
	87-A40-956-080		DIODE, EK04		C311	87-012-195-080	C-CAP,U	100P-50 CH
	87-070-274-080		DIODE,1N4003 SEM		C312	87-012-195-080		100P-50 CH
	87-A40-673-090		DIODE, D10XB20		C313 C314	87-012-164-080 87-012-164-080		2P-50 CK 2P-50 CK
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REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. N	IO. PART NO.	KANRI NO.	DESCRIPTION
C315 C316 C317 C318 C319	87-A10-897-080 87-A10-897-080 87-A11-548-080 87-A11-548-080 87-012-368-080	CAP,E 1 CAP,E 1 C-CAP,S C-CAP,S	00-25 BP SME 00-25 BP SME 560P-50 KB 560P-50 KB 0.1-50 ZF	C541 C542 C543 C544 C545	87-A10-293-080 87-A10-293-080 87-A12-091-080 87-A12-091-080 87-010-759-080	CAP,M 68 CAP,M 68 CAP,E 10 CAP,E 10	
C321 C322 C323 C325 C326	87-012-282-080 87-012-368-080 87-A11-548-080 87-012-368-080 87-012-282-080	C-CAP,S C-CAP,S C-CAP,S	1 4700P-50 1 0.1-50 ZF 1 560P-50 KB 2 0.1-50 ZF 3 4700P-50	C546 C547 C549 C554 C555	87-A10-305-080 87-010-759-080 87-010-759-080 87-016-083-080 87-A12-090-080	C-CAP,U C-CAP,U C-CAP,S	.068-50 J 0.1-25 F 0.1-25 F 0.15-16 RK .7-50 SMG
C327 C328 C330 C331 C336	87-012-274-080 87-012-274-080 87-012-368-080 87-012-368-080 87-012-271-080	C-CAP,U C-CAP,S C-CAP,S	1 1000P-50 B 1 1000P-50 B 1 0.1-50 ZF 1 0.1-50 ZF 1 560P-50 KB	C556 C559 C560 C561 C562	87-A12-091-080 87-A10-293-080 87-010-759-080 87-A10-039-080 87-A10-039-080	CAP,M 68 C-CAP,U C-CAP,U	0-50 SMG 800P-50 J 0.1-25 F 470P-50 J CH 470P-50 J CH
C341 C342 C343 C344 C345	87-012-271-080 87-012-271-080 87-012-271-080 87-012-273-080 87-012-273-080	C-CAP,U C-CAP,U C-CAP,U	1 560P-50 KB 1 560P-50 KB 1 560P-50 KB 1 820P-50 B 1 820P-50 B	C565 C566 C567 C568 C569	87-A12-090-080 87-A12-090-080 87-A12-090-080 87-A12-090-080 87-A12-090-080	CAP,E 4 CAP,E 4 CAP,E 4	.7-50 SMG .7-50 SMG .7-50 SMG .7-50 SMG .7-50 SMG
C402 C403 C404 C405 C406	87-012-277-080 87-A12-091-080 87-A11-548-080 87-A12-092-080 87-012-195-080	CAP,E 1 C-CAP,S CAP,E 2	1 1800P-50 B 0-50 SMG 560P-50 KB 2-50 SMG 1 100P-50 CH	C570 C571 C572 C577 C578	87-A12-090-080 87-A12-090-080 87-A12-090-080 87-A12-062-080 87-012-199-080	CAP,E 4 CAP,E 4 CAP,E 1	.7-50 SMG .7-50 SMG .7-50 SMG 00-10 SMG 220P-50 J CH
C407 C408 C409 C410 C411	87-012-164-080 87-A10-897-080 87-A11-548-080 87-012-368-080 87-012-282-080	CAP,E 1 C-CAP,S C-CAP,S	1 2P-50 CK 00-25 BP SME 5 560P-50 KB 0 0.1-50 ZF 1 4700P-50	C579 C700 C702 C703 C704	87-010-759-080 87-A12-090-080 87-010-759-080 87-A10-918-080 87-A12-090-080	CAP,E 4 C-CAP,U CAP,E 1	0.1-25 F .7-50 SMG 0.1-25 F 00-16 SMG .7-50 SMG
C412 C413 C414 C415 C416	87-012-271-080 87-012-368-080 87-012-274-080 87-010-866-080 87-016-299-080	C-CAP,S C-CAP,U CAP,E 1	560P-50 KB 0.1-50 ZF 1000P-50 KB 0-63 M VX 0-100 M SME	C705 C706 C708 C709 C800	87-010-190-080 87-010-759-080 87-A12-068-080 87-A10-918-080 87-010-759-080	CAP,E 4'CAP,E 1	.01 0.1-25 F 70-16 SMG 00-16 SMG 0.1-25 F
C420 C421 C422 C500 C501	87-012-368-080 87-012-271-080 87-012-273-080 87-012-199-080 87-A12-090-080	C-CAP,U C-CAP,U C-CAP,U	0.1-50 ZF 1560P-50 KB 1820P-50 B 1220P-50 J CH .7-50 SMG	C801 C900 C901 C902 C903	87-010-759-080 87-010-759-080 87-A12-092-080 87-A12-092-080 87-A12-092-080	C-CAP,U CAP,E 22 CAP,E 22	0.1-25 F 0.1-25 F 2-50 SMG 2-50 SMG 2-50 SMG
C502 C503 C504 C505 C506	87-A12-090-080 87-012-336-080 87-012-336-080 87-A10-305-080 87-A10-305-080	CAP, CHI CAP, CHI CAP, M 0	.7-50 SMG P SS 3300 SL P SS 3300 SL .068-50 J .068-50 J	C905 C906 C907 C908 C909	87-A12-069-080 87-A12-071-080 87-010-759-080 87-010-387-080 87-010-371-080	CAP,E 4' C-CAP,U	2-25 SMG 7-25 SMG 0.1-25 F 70-25 SME 70-6.3
C509 C510 C511 C512 C513	87-A10-298-080 87-A10-298-080 87-A12-090-080 87-A12-090-080 87-A12-071-080	CAP,M 0 CAP,E 4 CAP,E 4	.018-50 J .018-50 J .7-50 SMG .7-50 SMG 7-25 SMG	C910 C912 C913 C915 CN110	87-010-371-080 87-010-759-080 87-010-759-080 87-012-186-080 87-A60-620-010	C-CAP,U C-CAP,U	70-6.3 0.1-25 ZF 0.1-25 ZF 39P-50 CH V 2MM JMT
C514 C515 C516 C517 C518	87-A12-071-080 87-010-370-080 87-010-370-080 87-010-759-080 87-016-083-080	CAP,E 3 CAP,E 3 C-CAP,U	7-25 SMG 30-6.3 SME 30-6.3 SME 0.1-25 ZF 0.15-16 RK	CN202 CN502 CN503 CN508 CNA101	87-099-573-010 87-099-571-010 87-A60-056-010 87-A60-041-010 8A-AR3-654-010	CONN, 141 CONN, 121 CONN, 301	P TUC-P18P-B1 P TUC-P14P-B1 P V 9604S-12C P V 9604S-30C SY,9P VH
C519 C525 C526 C527 C528	87-016-083-080 87-012-199-080 87-012-199-080 87-012-199-080 87-012-199-080	C-CAP,U C-CAP,U C-CAP,U	0.15-16 RK 1220P-50 J CH 1220P-50 J CH 1220P-50 J CH 1220P-50 J CH	CNA201 CNA400 CNA901 J501 J502	8B-AR3-665-010 8B-AR1-660-010 8B-AR3-648-010 87-099-609-010 87-A60-947-010	CONN ASS CONN ASS JACK, PII	SY,4P VH(BAR) SY,6P VH(BAR) SY,2P -VIDEO3 N 4P KM EARTH N 4P W/R GLD
C529 C530 C531 C532 C533	87-012-199-080 87-012-199-080 87-A10-305-080 87-A10-293-080 87-016-083-080	C-CAP,U CAP,M 0 CAP,M 6	220P-50 J CH 220P-50 J CH .068-50 J 800P-50 J 0.15-16 RK	J700 J901 J902 J903 J904	87-A60-244-010 87-099-911-010 87-099-912-010 87-099-911-010 87-099-911-010	JACK, PII JACK, PII JACK, PII	N 1P BLK N 3P YEL N 3P YEL W/E N 3P YEL N 3P YEL
C536 C537 C538 C539 C540	87-A12-090-080 87-012-274-080 87-010-759-080 87-A12-087-080 87-010-248-080	C-CAP,U C-CAP,U CAP,E 1	.7-50 SMG 1000P-50 B 10.1-25 ZF -50 SMG 20-10M 11L SME	L101 L901 Q108 R51 R143	87-A50-693-010 87-005-239-080 8Z-NFT-604-110 87-A00-571-050 87-A00-258-080	COIL,100 CONN ASS RES,M/F	UH-RCR-110D OUH SY,3P SURR 0.15-2W J RZ 0.22-1W J

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R211 R212 R215 R216 R235	87-A00-571-050 87-A00-571-050 87-A00-571-050 87-A00-571-050 87-A00-878-050	RES,M/F RES,M/F RES,M/F	0.15-2W J RZ 0.15-2W J RZ 0.15-2W J RZ 0.15-2W J RZ 220-1W J VTP	C156 C157 C158 C159 C160	87-012-195-080 87-012-195-080 87-012-195-080 87-012-195-080 87-012-195-080	C-CAP,U C-CAP,U C-CAP,U	100P-50 CH 100P-50 CH 100P-50 CH 100P-50 CH 100P-50 CH
R236 R237 R238 R331 R332	87-A00-878-050 87-A00-878-050 87-A00-878-050 87-A00-571-050 87-A00-571-050	RES,M/F RES,M/F RES,M/F RES,M/F	220-1W J VTP 220-1W J 220-1W J 0.15-2W J RZ 0.15-2W J RZ	C161 C162 C164 C201 C202	87-012-195-080 87-010-677-040 87-A12-074-080 87-012-336-080 87-012-336-080	C-CAP,U CAP,E 0 CAP,E 4 CAP,CHI	100P-50 CH .15-50 7L 70-25 SMG P SS 3300 SL P SS 3300 SL
R380 R416 R424 R587 S292	87-A00-571-050 87-A00-571-050 87-A00-571-050 87-A00-147-090 87-A90-174-010	RES,M/F RES,M/F RES,M/F RES,M/F	0.15-2W J RZ 0.15-2W J RZ 0.15-2W J RZ 68-1W J RSF(S)	C202 C203 C204 C205 C206 C207	87-012-336-080 87-012-336-080 87-012-336-080 87-012-336-080 87-012-336-080	CAP, CHI CAP, CHI CAP, CHI CAP, CHI	P SS 3300 SL P SS 3300 SL P SS 3300 SL P SS 3300 SL P SS 3300 SL
TH201 TH202 TH301 TH302 TH401	87-A91-042-080 87-A91-042-080 87-A91-042-080 87-A91-042-080 87-A91-042-080	C-THMS,	100K 55001 100K 55001 100K 55001 100K 55001 100K 55001	C208 C209 C210 C211 C212	87-012-336-080 87-012-336-080 87-012-336-080 87-012-336-080 87-012-336-080	CAP, CHI CAP, CHI CAP, CHI	P SS 3300 SL P SS 3300 SL P SS 3300 SL P SS 3300 SL P SS 3300 SL
WH101 FRONT C.B	87-A90-510-010	HLDR,WI	RE 2.5-9P	C213 C214 C216 C217	87-010-408-040 87-012-368-080 87-015-699-040 87-015-699-040	C-CAP,S CAP,E 1	
C101 C102 C103 C104	87-012-195-080 87-012-195-080 87-010-759-080 87-010-759-080	C-CAP,U C-CAP,U	100P-50 CH 100P-50 CH 0.1-25 F 0.1-25 F	C218 C219 C220 C700	87-012-368-080 87-012-336-080 87-012-336-080 87-012-274-080	C-CAP,S CAP,CHI	0.1-50 F P SS 3300 SL P SS 3300 SL 1000P-50 KB
C104 C105 C107 C108	87-010-739-080 87-A10-189-040 87-012-286-080 87-010-759-080	CAP, E 2		C700 C701 C702	87-012-180-080 87-012-184-080 87-010-831-080	C-CAP,U C-CAP,U	22P-50 J CH 33P-50 J CH 0.1-16 ZF
C109 C110 C111	87-012-176-080 87-012-198-080 87-A10-039-080	C-CAP,1 C-CAP,U	80P 470P-50 J CH	C704 C705 C706 C707	87-012-286-080 87-012-286-080 87-A12-091-080 87-012-270-080	C-CAP,U CAP,E 1	0.01-25 KB 0.01-25 KB 0-50 SMG 470P-50 KB
C112 C113 C114 C115 C116	87-012-274-080 87-012-199-080 87-012-199-080 87-012-199-080 87-012-278-080	C-CAP, 2: C-CAP, 2: C-CAP, 2:	20P	C708 C709 C710 C711 CN101	87-010-831-080 87-A12-091-080 87-012-199-080 87-012-199-080 87-A60-079-010	CAP,E 1 C-CAP,U C-CAP,U	0.1-16 ZF 0-50 SMG 220P-50 J CH 220P-50 J CH P H 9604S-08F
C117 C118 C119 C120 C121	87-012-278-080 87-012-274-080 87-012-286-080 87-010-759-080 87-A10-189-040	C-CAP,U C-CAP,U C-CAP,U	2200P-50 B 1000P-50 B 0.01-25 0.1-25 F 20-10	CN104 CN105 CN107 CN701 FFC101	87-A60-061-010 87-A60-066-010 87-A60-074-010 88-805-036-010 88-908-101-110	CONN, 30 CONN, 19 CONN AS	P V 9604S-06C P H 9604S-30F P H 9604S-19F SY,3P E, 8P 1.25 10MM
C122 C123 C124 C126 C128	87-010-759-080 87-010-759-080 87-010-759-080 87-015-699-040 87-015-699-040	C-CAP,U C-CAP,U CAP,E 1		FFC104 FFC105 FFC107 FL201 L101	88-906-061-110 88-930-441-110 88-919-331-110 8B-AR3-601-010 87-A50-655-010	FF-CABL FF-CABL FL,HNA-	E,6P 1.25 60MM E,30P 1.25 440MM E,19P 1.25 330MM 12SM12 BAR-3 K 4.19MHZ (TOKO)7KLY
C129 C130 C134 C136 C138	87-010-787-080 87-012-278-080 87-010-785-080 87-012-278-080 87-010-759-080	C-CAP,U C-CAP,U C-CAP,U C-CAP,U	0.022-25 2200P-50 B 0.015-25 BK 2200P-50 B 0.1-25 F	L700 LED2 LED3 LED4 LED5	87-005-847-080 87-A40-317-080 87-A40-317-080 87-A40-317-080 87-A40-317-080	COIL, 2 LED, SLR LED, SLR LED, SLR	2 UH K CECS -342VCT31 RED -342VCT31 RED -342VCT31 RED -342VCT31 RED
C139 C141 C142 C143 C144	87-012-274-080 87-012-195-080 87-012-274-080 87-012-274-080 87-012-274-080	C-CAP,U C-CAP,U C-CAP,U C-CAP,U	1000P-50 KB 100P-50 J CH 1000P-50 KB 1000P-50 KB 1000P-50 KB	LED6 LED7 LED8 LED9 LED10	87-A40-317-080 87-A40-317-080 87-A40-317-080 87-A40-317-080 87-A40-317-080	LED, SLR LED, SLR LED, SLR	-342VCT31 RED -342VCT31 RED -342VCT31 RED -342VCT31 RED -342VCT31 RED
C145 C146 C147 C148 C149	87-012-195-080 87-012-195-080 87-012-274-080 87-012-274-080 87-012-274-080	C-CAP, U C-CAP, U C-CAP, U C-CAP, U	100P-50 J CH 100P-50 J CH 1000P-50 KB 1000P-50 KB 1000P-50 KB	S301 S302 S303 S304 S305	87-A90-095-080 87-A90-095-080 87-A90-095-080 87-A90-095-080 87-A90-095-080	SW, TACT SW, TACT SW, TACT	EVQ11G04M EVQ11G04M EVQ11G04M EVQ11G04M EVQ11G04M
C150 C151 C152 C153 C155	87-012-274-080 87-012-274-080 87-012-195-080 87-012-195-080 87-012-274-080	C-CAP,U C-CAP,U C-CAP,U	1000P-50 KB 1000P-50 KB 100P-50 J CH 100P-50 J CH 1000P-50 KB	S306 S307 S309 S310 S313	87-A90-095-080 87-A90-095-080 87-A90-095-080 87-A90-095-080 87-A90-095-080	SW, TACT SW, TACT SW, TACT	EVQ11G04M EVQ11G04M EVQ11G04M EVQ11G04M EVQ11G04M

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S314	87-A90-095-080		EVQ11G04M	C908	87-012-165-080		3P-50 C CH
S315	87-A90-095-080		EVQ11G04M	C909	87-012-272-080		680P-50 KB
S316 S318	87-A90-095-080		EVQ11G04M EVQ11G04M	C910 C911	87-012-164-080 87-012-166-080		2P-50 C CH 4P-50 CH
S319	87-A90-095-080 87-A90-095-080		EVQ11G04M EVQ11G04M	C912	87-012-195-080		100P-50 CH
S320	87-A90-095-080	SW, TACT	EVQ11G04M	C913	87-012-286-080	C-CAP,U	0.01-25
S321	87-A90-095-080			C914	87-012-286-080		
SW101 SW102	87-A92-067-010 87-A92-068-010		EC12E12204N EC12E12504N	C915 C916	87-012-286-080 87-012-286-080		0.01-25 0.01-25 KB
X700	87-A70-307-010	,	L 4.332MHZ CSA-309ST	C917	87-012-178-080		18P-50 J CH
TUNER C.B				C918 C919	87-012-172-080 87-012-184-080		10P-50 D CH 33P-50 J CH
TUNER C.B				C920	87-012-184-080		33P-50 J CH
C772	87-012-286-080		0.01-25	C921	87-012-180-080		22P-50 J CH
C782	87-012-286-080		0.01-25	C922	87-012-174-080	C-CAP,U	12P-50 J CH
C786 C788	87-A11-056-080 87-012-167-080			C923	87-012-286-080	C CAD II	0.01-25 KB
C789	87-012-167-080		0.018-25 KB GRM	C924	87-012-266-080		2P-50 C CH
		, -		C925	87-012-164-080		2P-50 C CH
C790	87-010-786-080	,	0.018-25 KB GRM	C926	87-012-286-080		0.01-25 KB
C791	87-010-831-080		0.1-16 F	C927	87-012-195-080	C-CAP,U	100P-50 CH
C792 C793	87-012-286-080 87-A11-056-080		0.01-25 1-10 ZF	C942	87-012-167-080	C-CAP II	5P-50 C CH
C795	87-012-286-080			C947	87-012-107-080		0.01-25 KB
		,		C948	87-012-270-080		470P-50 KB
C798	87-A11-057-080	,	0.1-16 KB	C952	87-012-286-080		0.01-25 KB
C799 C800	87-010-982-040 87-012-191-080		3-25 M 5L SRE	C957	87-012-174-080	C-CAP,U	12P-50 J CH
C800 C801	87-012-191-080 87-A11-056-080		68P-50 J CH 1-10 ZF	C958	87-012-286-080	C-CAP II	0.01-25 KB
C802	87-010-829-080		0.047-16	C962	87-A11-056-080		
				C963	87-010-831-080	C-CAP,U	0.1-16 F
C804	87-A12-062-080		00-10 SMG	C971	87-A12-067-080		30-16 SMG
C807 C808	87-A10-463-080 87-A11-056-080		0.47-10 ZF 1-10 ZF	C972	87-A11-063-080	C-CAP, S	4.7-10 ZF
C809	87-A11-056-080		1-10 ZF	C973	87-012-286-080	C-CAP,U	0.01-25
C811	87-A10-463-080		0.47-10 ZF	C974	87-012-286-080		
2010	05 340 460 000	a az p	0.45.40.55	C976	87-010-759-080		0.1-25 ZF
C812 C815	87-A10-463-080 87-A10-463-080		0.47-10 ZF 0.47-10 ZF	C979 C981	87-012-195-080 87-A12-071-080		100P-50 CH 7-25 SMG
C816	87-A10-463-080		0.47-10 ZF 0.47-10 ZF	C301	67-A12-071-060	CAP,E 4	7-25 BMG
C818	87-012-276-080	,	1500P-50 KB	C982	87-010-831-080	C-CAP,U	0.1-16 F
C821	87-A11-063-080	C-CAP,S	4.7-10 ZF	C983	87-A11-132-080		J 0.01-50 KB
C823	87-012-274-080	C CAD II	1000P-50 KB	C984 C985	87-012-286-080 87-012-195-080		0.01-25 100P-50 CH
C824	87-A11-063-080			C987	87-012-195-080		
C825	87-A11-317-080		0.068-16 KB			, -	
C826	87-012-286-080		0.01-25 KB	C989	87-012-286-080		0.01-25 KB
C831	87-010-552-040	CAP,E 22	2-16 M 5L SRE	C990	87-012-195-080		100P-50 CH
C836	87-012-286-080	C-CAP,U		C991 C992	87-012-182-080 87-012-172-080		27P-50 J CH 10P-50 J CH
C837	87-A11-058-080		0.22-10 KB	C993	87-012-274-080		1000P-50 B
C842	87-A11-057-080		0.1-16 KB				
C844	87-012-286-080			C994	87-012-195-080		100P-50 CH
C850	87-A11-056-080	C-CAP,U	1-10 ZF	C995 C996	87-012-274-080 87-012-195-080		1000P-50 B 100P-50 CH
C851	87-012-286-080	C-CAP,U	0.01-25	C997	87-012-133-080		0.1-16 F
C852	87-012-286-080		0.01-25	C998	87-010-553-040		7-16 M 5L SRE
C853	87-012-286-080		0.01-25				
C855 C856	87-012-280-080 87-012-280-080		3300P-50 3300P-50	CF831 CF832	87-008-423-010 82-785-747-010		CF SFE10.7MS3G-A CF MS2 GHY,R
C656	07-012-200-000	C-CAP, U	33002-50	CN992	87-A60-056-010		P V 9604S-12C
C858	87-010-831-080	C-CAP,U	0.1-16 ZF	CNA901	87-A60-620-010		V 2MM JMT
C859	87-010-831-080	, .	0.1-16 ZF	D901	87-A40-916-040	C-VARI-0	CAP,HVC202A
C860	87-012-286-080 87-012-275-080		0.01-25	DOOO	07 740 016 040	C VADT (	מפטנווו מגי
C861 C862	87-012-275-080		1200P-50 KB 1200P-50 KB	D902 D903	87-A40-916-040 87-A41-048-040		CAP,HVC202A CAP,HVM16-03 TL
0002	07 012 273 000	c cm , o	12001 30 10	FFC992	88-912-131-110		E,12P 1.25 130MM
C863	87-012-280-080		3300P-50 KB	J832	87-A61-534-010		L,ANT PAL AJ-2021
C864	87-012-280-080		3300P-50 KB	J940	87-A60-633-010	CONN, 2P	H 2.5MM JMT
C870 C871	87-A11-061-080 87-A11-061-080		2.2-10 KB 2.2-10 KB	JW959	87-A11-132-080	ሮ፮፬ ሞሮ ፣	J 0.01-50 KB
C900	87-A11-057-080		0.1-16 KB	L801	87-A50-608-010	,	DET-N(TOK)
				L802	87-A91-551-010	FLTR, PC	FJZH-450 L(TOK)
C901	87-012-162-080		1P-50 C CH	L803	87-A50-027-010		POLE MPX (TOK)
C902 C903	87-012-165-080 87-012-164-080		3P-50 C CH 2P-50 C CH	L804	87-A50-027-010	COIL, 1	POLE MPX (TOK)
C903	87-012-164-080 87-A12-348-080	,	560P-25 J CH	L811	87-005-847-080	COIL.2	2UH (CECS)
C905	87-012-162-080		1P-50 C CH	L832	87-005-847-080	COIL, 2.2	2UH (CECS)
acac	07 010 150 000	0 035	100 50 0 00	L901	86-ZA1-612-010		ANT/RF-1-Z
C906 C907	87-012-172-080 87-012-166-080	,	10P-50 D CH 4P-50 C CH	L902 L903	86-ZA1-613-010 87-005-847-080		ANT/RF-2-Z 2UH K CECS
0001	J, JIL 100-000	C CAF, U	11 00 0 011		2, 003 041-000	CO111, 2.2	2021 10 01100

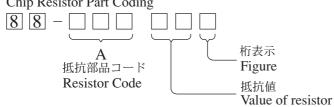
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L904	86-ZA1-613-010		ANT/RF-2-Z	C209	87-A12-091-080	CAP,E 1	0-50 SMG
L905	86-ZA1-612-010		ANT/RF-1-Z	C210	87-A12-091-080		0-50 SMG
L906	87-005-847-080	,	2UH (CECS)	C211	87-012-195-080	,	100P-50 CH
L907 L908	86-ZA1-614-010 88-ZA1-624-010		IFT 7-6.2 (COILS)	C212 C213	87-012-278-080 87-010-759-080		2200P-50 B 0.1-25 F
L941	87-A50-020-010		Г LW (COI) 252 KHZ	C215	87-010-759-080		0.1-25 F
L942	87-A50-019-010		r Lw (COI) 856 KHZ	C217	87-012-284-080		6800P-50
L951	8A-NF8-667-010		PACK 4 (TOK)	C218	87-012-284-080	C-CAP,U	6800P-50
R790	87-012-286-080		0.01-25	C219	87-012-278-080		2200P-50 B
TC942	87-A91-774-080	IKIMMEK	PLY 30P 6.8X5.4 CDYL	C220	87-012-278-080	C-CAP, U	2200P-50 B
X991	87-A70-306-010	VIB, XTA	L 4.500MHZ CSA-309ST	C221 C222	87-012-278-080 87-012-278-080		2200P-50 B 2200P-50 B
				C223	87-012-282-080	,	4700P-50
DIGITAL C	.В			C224	87-012-282-080		4700P-50
C1 01	07 710 001 000	CAD E 1	O EO OMO	C225	87-A12-091-080	CAP,E 1	0-50 SMG
C101 C102	87-A12-091-080 87-A12-091-080		0-50 SMG 0-50 SMG	C226	87-A12-091-080	CAP E 1	0-50 SMG
C103	87-012-172-080			C235	87-A12-091-080		0-50 SMG
C104	87-012-172-080	C-CAP,U	10P CH	C251	87-010-759-080		0.1-25 F
C105	87-010-759-080	C-CAP,U	0.1-25 F	C252	87-010-759-080	,	0.1-25 F
C106	87-A10-369-080	C CND C	0.47-16 KB	C401	87-010-759-080	C-CAP,U	0.1-25 F
C106	87-A10-369-080		0.47-16 KB 70-16 SMG	C404	87-010-759-080	C-CAP.II	0.1-25 F
C108	87-010-759-080		0.1-25 F	C405	87-A12-087-080		
C109	87-A12-068-080		70-16 SMG	C406	87-A12-090-080		.7-50 SMG
C110	87-010-759-080	C-CAP,U	0.1-25 F	C410	87-012-274-080		1000P-50 KB
9111	00 340 004 000	G3.D. T. 1.	2 52 646	C501	87-012-198-080	C-CAP,U	180P-50 J CH
C111 C112	87-A12-091-080 87-A12-091-080		0-50 SMG 0-50 SMG	C502	87-012-198-080	C-CDD II	180P-50 J CH
C112	87-012-195-080		100P-50 CH	C502	87-A12-071-080		7-25 SMG
C114	87-012-195-080		100P-50 CH	C504	87-A12-091-080		0-50 SMG
C115	87-012-284-080	C-CAP,U	6800P-50	C505	87-A12-071-080		7-25 SMG
G116	00 010 004 000	G G3.D 11	6000D 50	C506	87-A12-091-080	CAP,E 1	0-50 SMG
C116 C117	87-012-284-080 87-012-278-080		6800P-50 2200P-50 B	C507	87-010-759-080	C_CND II	0.1-25 F
C118	87-012-278-080		2200P-50 B	C508	87-010-759-080		0.1-25 F
C119	87-012-282-080		4700P-50	C509	87-A12-091-080		0-50 SMG
C120	87-012-282-080	C-CAP,U	4700P-50	C510	87-A12-091-080		0-50 SMG
G1 2 1	07 010 070 000	a and ii	22200 50 0	C511	87-A12-091-080	CAP,E 1	0-50 SMG
C121 C122	87-012-278-080 87-012-278-080		2200P-50 B 2200P-50 B	C512	87-012-278-080	C-CAP II	2200P-50 B
C123	87-A12-091-080		0-50 SMG	C512	87-012-278-080		2200P-50 B
C124	87-A12-091-080		0-50 SMG	C601	87-A12-091-080		0-50 SMG
C125	87-010-759-080	C-CAP,U	0.1-25 F	C602	87-010-759-080		0.1-25 F
C151	87-A12-091-080	מאה בי 1	0-50 SMG	C603	87-A12-091-080	CAP,E 1	0-50 SMG
C151	87-A12-091-080		0-50 SMG	C604	87-010-759-080	C-CAP.II	0.1-25 F
C153	87-012-172-080			C606	87-012-274-080		1000P-50 KB
	87-012-172-080				87-012-172-080		10P-50 D CH
C155	87-010-759-080	C-CAP,U	0.1-25 F	C617	87-A12-087-080	,	
C156	87-A10-369-080	C-CAP.S	0.47-16 KB	C618	87-010-759-080	C-CAP, U	0.1-25 F
C157	87-010-759-080		0.1-25 F	C621	87-A12-091-080	CAP,E 1	0-50 SMG
C159	87-A10-047-080	C-CAP,U	1-10 ZF	C624	87-010-759-080	C-CAP,U	0.1-25 F
C160	87-A10-047-080		1-10 ZF	C631	87-A12-091-080		0-50 SMG
C161	87-012-195-080	C-CAP,U	100P-50 CH	C651 C653	87-010-101-080 87-010-759-080	,	
C162	87-012-195-080	C-CAP.U	100P-50 CH	C033	01-010-133-080	C-CAP,U	0.1-25 F
C163	87-010-759-080		0.1-25 F	C654	87-010-759-080	C-CAP,U	0.1-25 F
C165	87-012-284-080		6800P-50	C655	87-A12-087-080		
C166	87-012-284-080	,	6800P-50	C656	87-A12-087-080		
C167	87-012-278-080	C-CAP,U	2200P-50 B	C657 C658	87-010-759-080 87-010-759-080		0.1-25 F 0.1-25 F
C168	87-012-278-080	C-CAP,U	2200P-50 B	C030	07-010-733-000	C-CAF, U	0.1-25 F
C169	87-012-278-080		2200P-50 B	C659	87-A11-148-080	CAP, TC	U 0.1-50 ZF
C170	87-012-278-080		2200P-50 B	C701	87-012-274-080		1000P-50 KB
C171	87-012-282-080		4700P-50	C702	87-010-757-080		0.047-25 F
C172	87-012-282-080	C-CAP, U	4700P-50	C704 C711	87-012-278-080 87-010-759-080		2200P-50 B 0.1-25 F
C173	87-A12-091-080	CAP,E 1	0-50 SMG	C, 11	5, 510 139-000	C CAF,U	J. I IJ I
C174	87-A12-091-080	CAP,E 1	0-50 SMG	C712	87-A12-062-080		00-10 SMG
C175	87-010-759-080		0.1-25 F	C714	87-A10-031-080		0.01-25 KB
C201	87-A12-091-080		0-50 SMG	C715	87-A10-031-080		0.01-25 KB
C202	87-A12-091-080	CAP, E I	0-50 SMG	C751 C793	87-012-278-080 87-010-196-080		2200P-50 B 0.1-25 ZF
C203	87-012-172-080	C-CAP,U	10P CH	0,00	5, 010 170-000	C CAF, D	U. I IJ III
C204	87-012-274-080	C-CAP,U	1000P-50 B	C794	87-012-180-080		22P-50 CH
C205	87-010-759-080		0.1-25 F	C795	87-010-759-080		0.1-25 ZF
C206 C207	87-A10-369-080 87-010-759-080		0.47-16 K B 0.1-25 F	C801 C802	87-010-759-080 87-012-286-080		0.1-25 ZF 0.01-25 KB
C207	01-010-139-080	C-CAP,U	0.1.23 F	C802 C804	87-012-286-080 87-A10-039-080		470P-50 J CH
						0 0111,0	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	RE	F. NO. PAR		KANRI NO.	DESCRIPTION
C805 C808 C810 C818 C819	87-A12-088-080 87-012-172-080 87-012-274-080 87-010-759-080 87-A12-062-080	CAP,E 2. C-CAP,U C-CAP,U C-CAP,U	2-50 SMG 10P-50 D CH 1000P-50 B 0.1-25 F 00-10 SMG	C91 CN50 CN51 J50 J52	87-0 87-A 87-A	12-286-080 09-663-010 .61-300-010 .61-612-010	C-CAP, U CONN, 6P CONN, 4P TERMINA	
C820 C823 CN102 CN402 FB601	87-010-759-080 87-010-759-080 87-099-560-010 87-A60-051-010 87-008-372-080	C-CAP,U, CONN,14E CONN,19E	0.1-25 F 0.1-25 F TUC-P V 9604S-19C EMI BL OIRNI	L50 L52 L53 L54 L55	87-A 87-A 87-A	.50-610-010 .50-610-010 .50-610-010 .50-610-010 .50-610-010	COIL, 1U. COIL, 1U. COIL, 1U.	H K (MDEC)
FB602 FB603 FB701 FB702 FB801	87-008-372-080 87-008-372-080 87-008-372-080 87-008-372-080 87-008-372-080	FILTER, FILTER, FILTER,	EMI BL OIRNI EMI BL OIRNI EMI BL OIRNI EMI BL OIRNI EMI BL OIRNI	AMP C C803 C804	87-0	12-278-080 12-278-080		2200P-50 B 2200P-50 B
FB802 J751 JW173 JW185	87-008-372-080 87-A60-573-010 87-008-372-080 87-008-372-080	JACK, PIN FLTR, EMI	EMI BL OIRNI N 1P ORN E BL01 RN1 E BL01 RN1	C805 C806 C807	87-A 87-0	.12-091-080 .12-091-080 .12-195-080	CAP,E 1 C-CAP,U	0-50 SMG 0-50 SMG 100P-50 CH
JW504 JW505 X701	87-008-372-080 87-A11-148-080 87-A70-186-080	FLTR, EMI	E BL01 RN1 J 0.1-50 ZF FAL OSC FCX0-3	C809 C810 C811 C812	87-A 87-A 87-0	12-092-080 12-092-080 12-273-080 12-273-080	CAP,E 2 CAP,E 2 C-CAP,U	2-50 SMG 2-50 SMG 820P-50 B 820P-50 B
VOLUME C.E C601 CN603	87-012-274-080 87-A60-081-010	,	1000P-50 B P H 9604S-06F	C813 C814 C815 C816 C817	87-A 87-0 87-0	10-897-080 10-897-080 12-164-080 12-164-080 12-271-080	CAP,E 1 C-CAP,U C-CAP,U	00-25 BP SME 00-25 BP SME 2P-50 CK 2P-50 CK 560P-50 KB
S600 S601 SW601	87-A90-095-080 87-A90-095-080 87-A91-645-010	SW, TACT SW, TACT	EVQ11G04M EVQ11G04M EC12E24304NON-CLICK	C818 C819 C820 C821	87-0 87-0 87-0	12-271-080 12-271-080 12-271-080 12-271-080	C-CAP,U C-CAP,U C-CAP,U	560P-50 KB 560P-50 KB 560P-50 KB 560P-50 KB
HP/VIDEO (	С.В			C822		12-271-080		560P-50 KB
C502 C503 C504 C505 C506	87-A11-144-080 87-A11-144-080 87-010-188-080 87-010-188-080 87-012-278-080	CAP,TC U C-CAP,68 C-CAP,68		C823 C824 C827 C828 C831	87-0 87-0 87-0	12-271-080 12-271-080 12-368-080 10-866-080 12-274-080	C-CAP,U C-CAP,S CAP,E 1	560P-50 KB 560P-50 KB 0.1-50 F 0-63 M VX 1000P-50 B
C507 C508 CN501 CN502 FB502	87-012-278-080 87-A11-144-080 87-A60-666-010 87-099-201-010 87-008-372-080	CAP,TC U CONN,2P CONN,8P	2200P-50 KB J 0.1-50 KB H 2MM JMT 6216 H EMI BL OIRNI	C832 C870 CN80	87-0	12-274-080 10-866-080 99-562-010	CAP,E 1	1000P-50 B 0-63 M VX P TUC-P18X-B1
FB503 J502 J503 JW503	87-008-372-080 87-A60-606-010 87-A60-488-010 87-008-474-080	FILTER, JACK, PIN JACK, DIA	EMI BL OIRNI N 3P R/W/Y W/O SW H A6.3 BLK ST W/SW KM16# BL02RN1-R62T2 EMI	C3 C4	87-0 87-A 87-A	10-388-080 .12-089-080 .11-148-080 .11-148-080	CAP,E 3 CAP,TC CAP,TC	000-25 M SME .3-50 SMG U 0.1-50 ZF U 0.1-50 ZF
SPEAKER C.	.В			C5 C6		11-148-080		U 0.1-50 ZF U 0.1-50 KB
C51 C52 C53 C56 C57	87-012-368-080 87-012-368-080 87-012-368-080 87-012-368-080 87-012-368-080	C-CAP,S C-CAP,S C-CAP,S	0.1-50 F 0.1-50 F 0.1-50 F 0.1-50 F 0.1-50 F	CN3 CNA1 CNA2	87-A 8B-A 88-8	.60-851-010 .R4-651-010 .05-033-690 .R3-625-010	CONN, 9P CONN AS CONN AS	
C58 C61 C62 C64	87-012-368-080 87-012-286-080 87-012-286-080 87-012-286-080	C-CAP, S C-CAP, U C-CAP, U C-CAP, U	0.1-50 F 0.01-25 0.1-25 KB 0.01-25	⚠ PT2 ⚠ RY1 ڝ T1 ὧ T2	87-A 87-A	F8-659-010 .91-368-010 .60-317-010	RELAY,A TERMINA	ZNF-8(E)TAM CDC12V DG12D-O(M)-2 L, 1P MSC L, 1P MSC
C65	87-010-191-080		0.015-50 ZF	AC OU	TLET C.B			
C66 C67 C80 C81 C83	87-010-191-080 87-010-191-080 87-010-191-080 87-010-191-080 87-012-286-080	C-CAP,S C-CAP,S C-CAP,S	0.015-50 ZF 0.015-50 ZF 0.015-50 ZF 0.015-50 ZF 0.015-50 KB	↑ F102 ↑ FC10 ↑ FC10 ↑ J102 ↑ J103	3 87-0 4 87-0	.91-218-010 33-147-010 33-147-010 09-932-010 09-932-010	FUSE CL. FUSE CL. OUTLET,	250V 50T AMP,MT 20 AMP,MT 20 AC E YKE31-0090 AC E YKE31-0090
C84 C85 C86 C88 C89	87-012-286-080 87-010-759-080 87-012-368-080 87-012-368-080 87-012-368-080	C-CAP,U C-CAP,S C-CAP,S	0.01-25 KB 0.1-25 ZF 0.1-50 ZF 0.1-50 ZF 0.1-50 ZF	VM C.	В	49-919-010		V WHT EH

#### 〇チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

#### Chip Resistor Part Coding



チップ抵抗 Chip resistor

容量	種類	許容誤差	記号	寸法/Dime	ensions (	(mm)		抵抗コード : A
Wattage	Type	Tolerance	Symbol	外形/Form	L	W	t	Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ	L J t	1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ	r	3.2	1.6	0.55	128

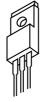
#### TRANSISTOR ILLUSTRATION



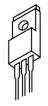
ЕСВ



E C B



ВСЕ



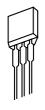
GDS

CC5551 CSC4115BC 2SA1015GR 2SA1980G 2SC1815GR 2SC5343Y









ЕСВ

2SC4115SRS

DTC114ES



2SK2158

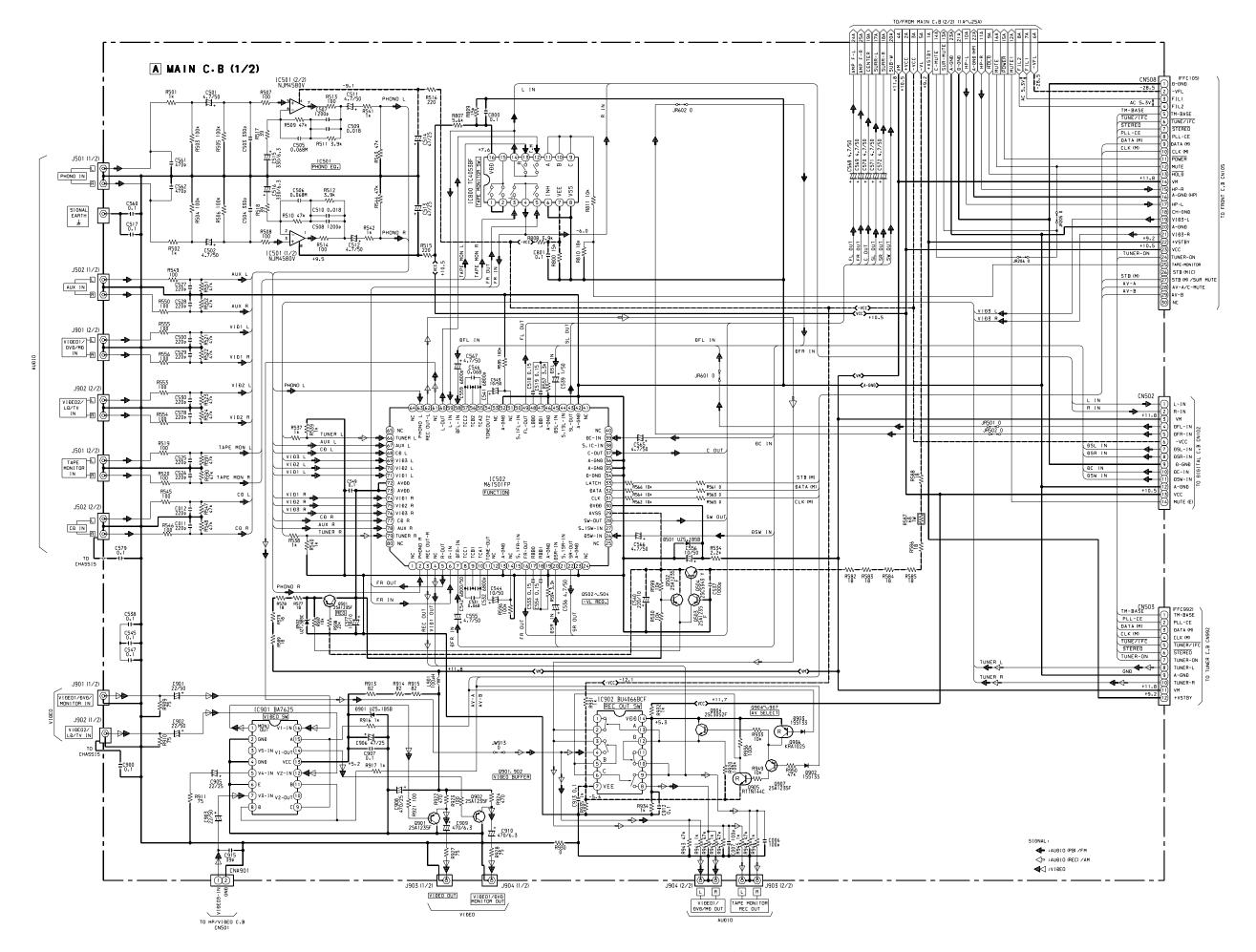


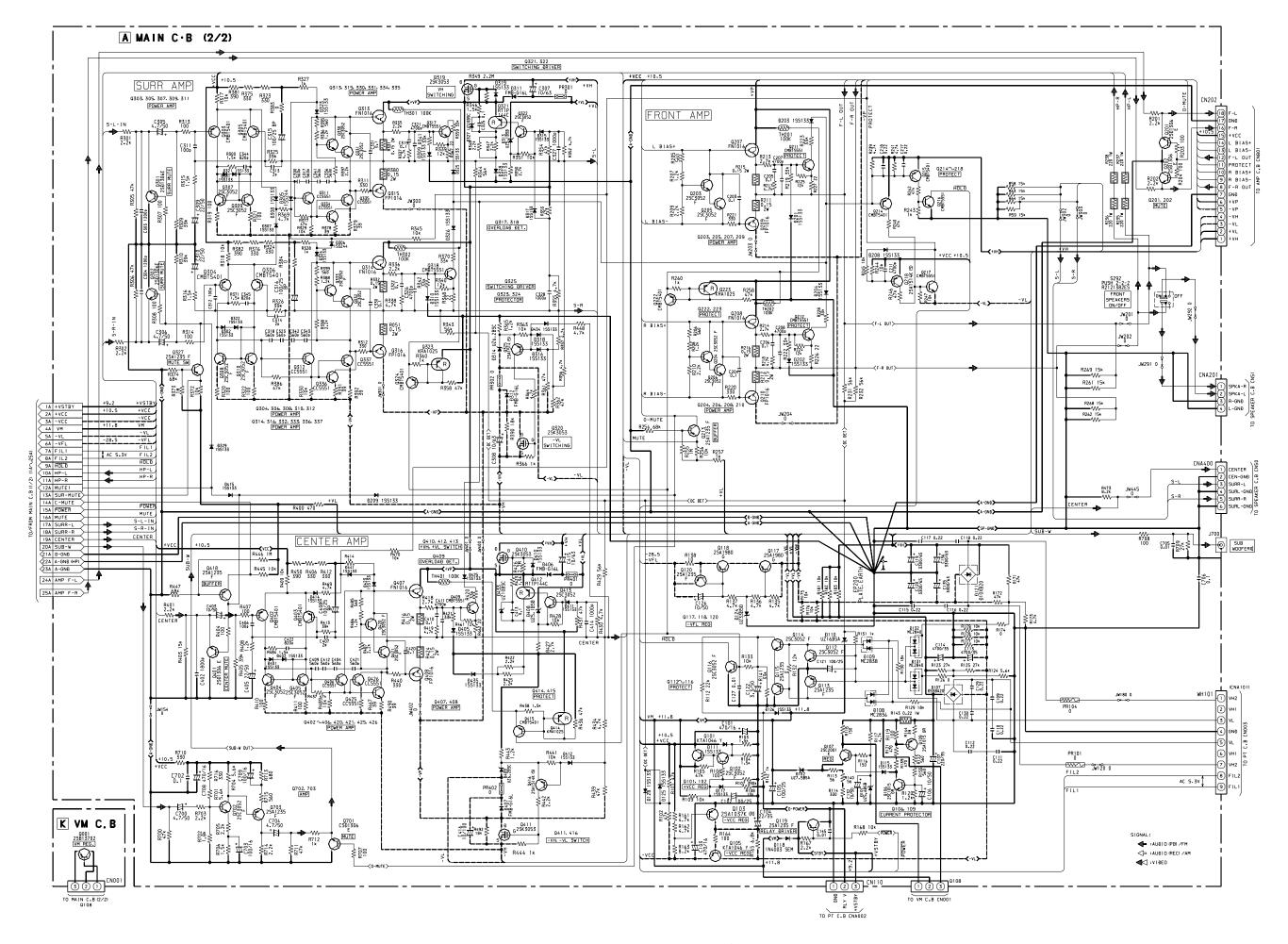
2SK360E

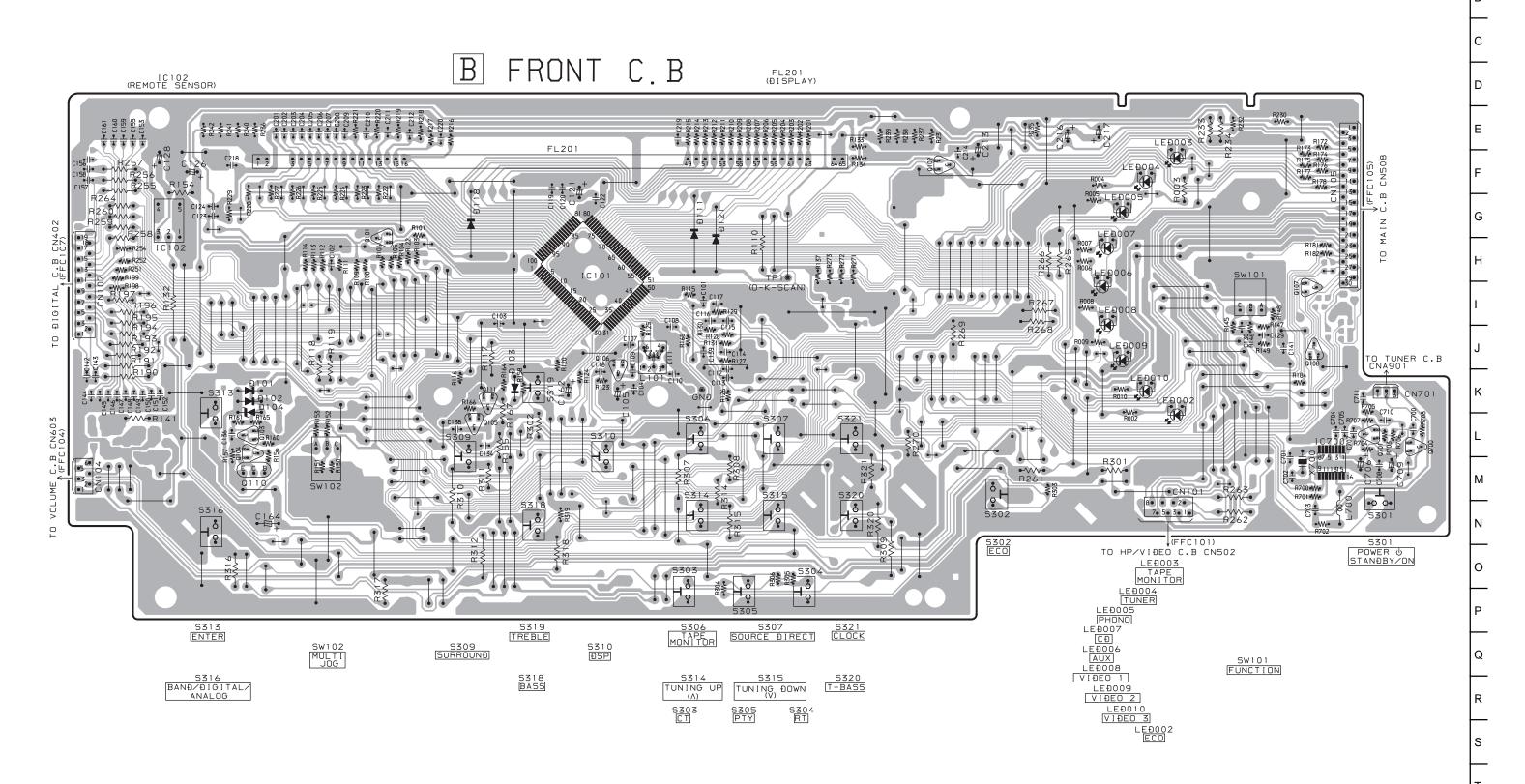


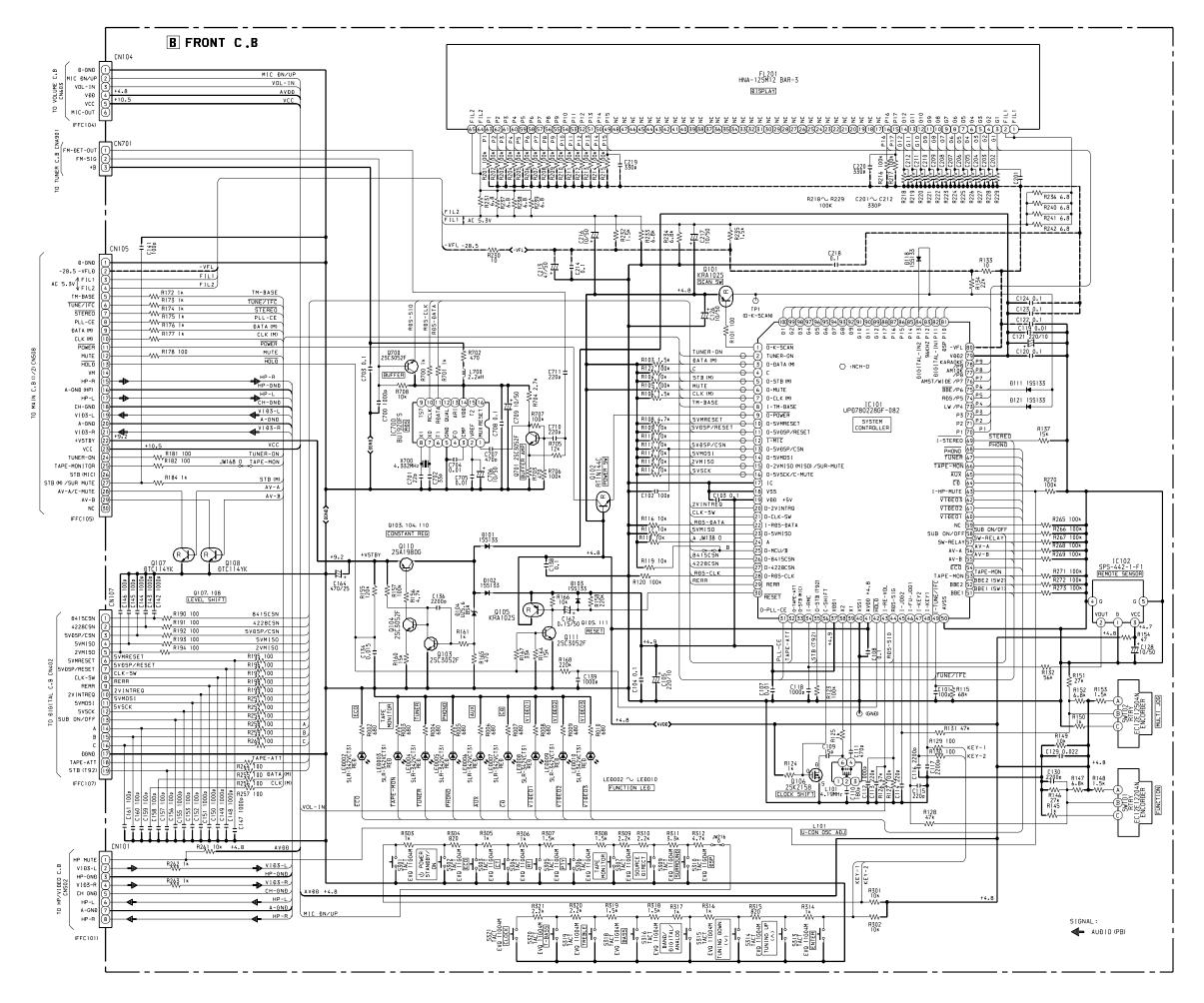
2SA1037K(R) CSA1362GR 2SA1514K(S) CSD1306E 2SA1235F DTC114YKA 2SC2714O DTC123JKA 2SC3052F KRA102S 2SD1306E KRA107S CMBT5401 RT1N144C

RT1P144C CMBT5551

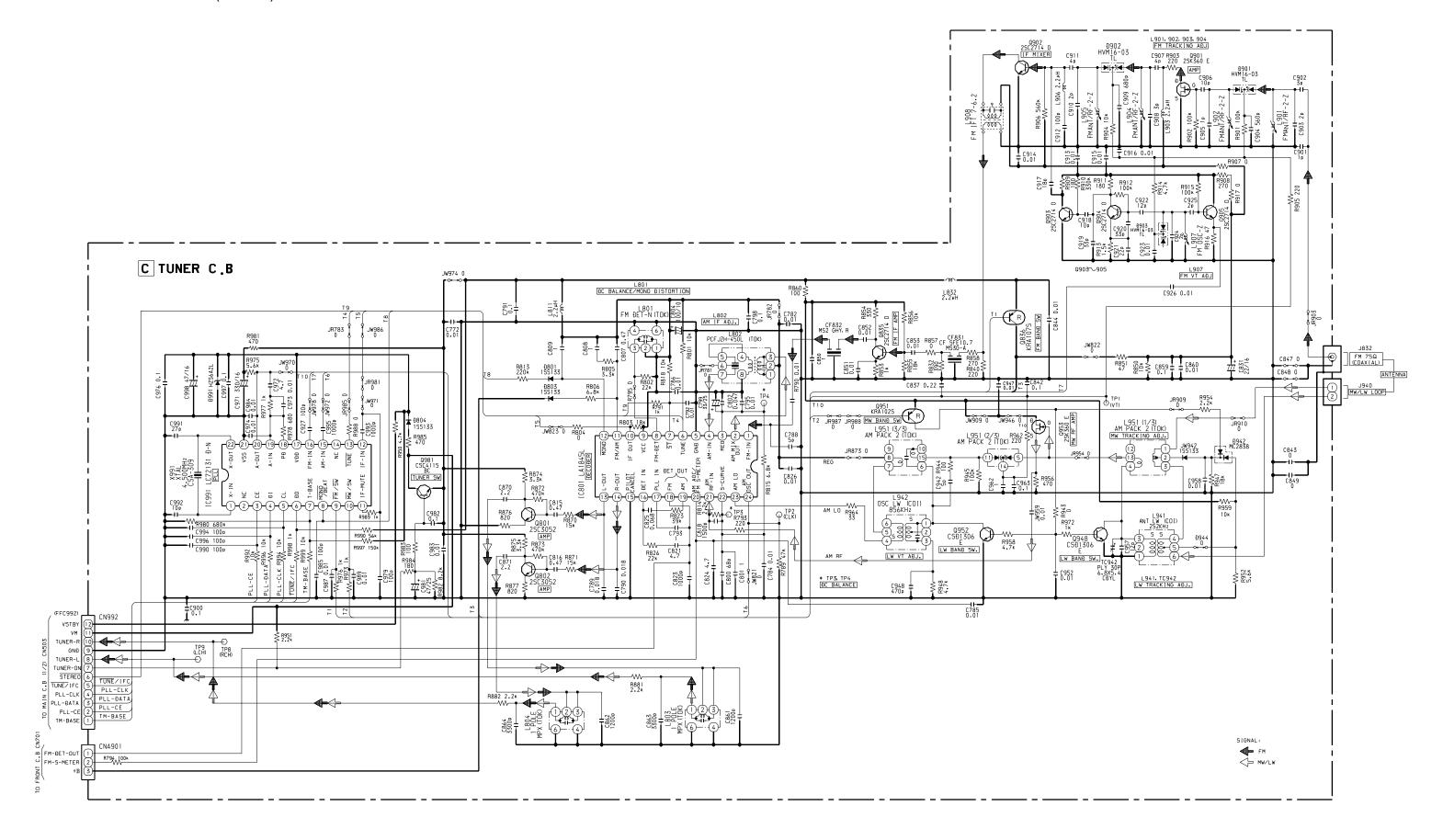




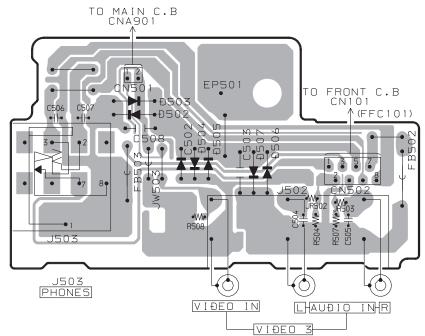




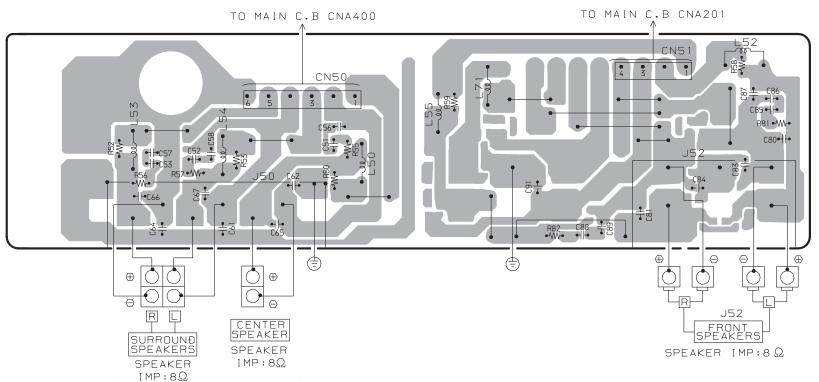
ANTENNA

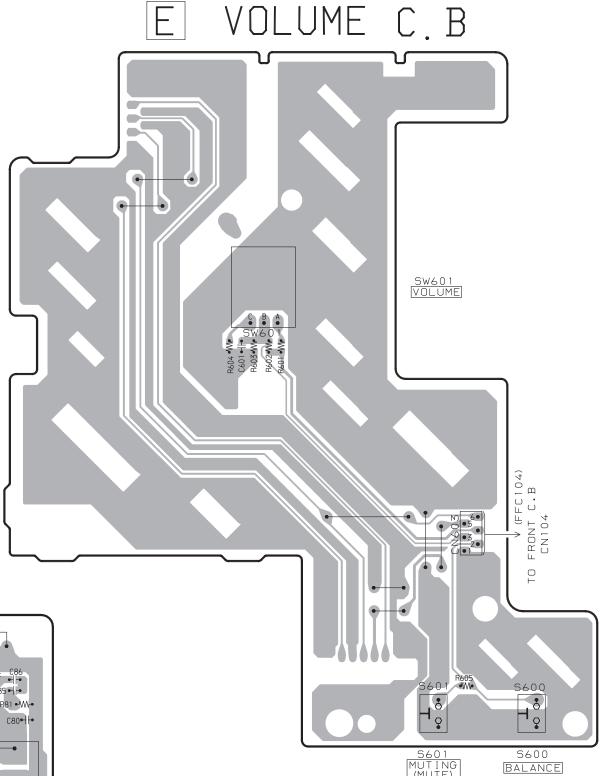


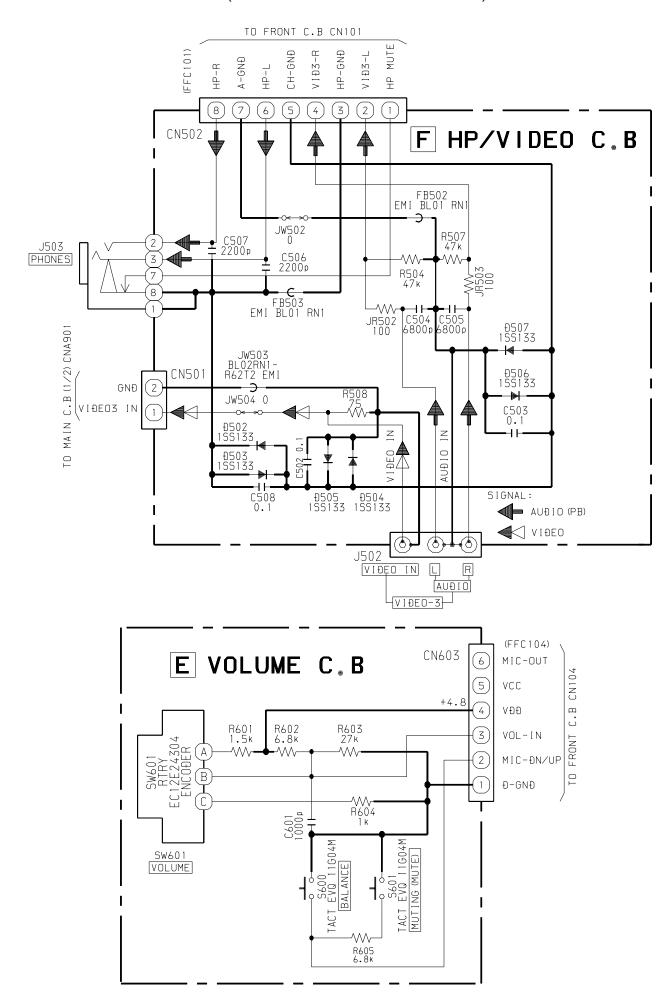


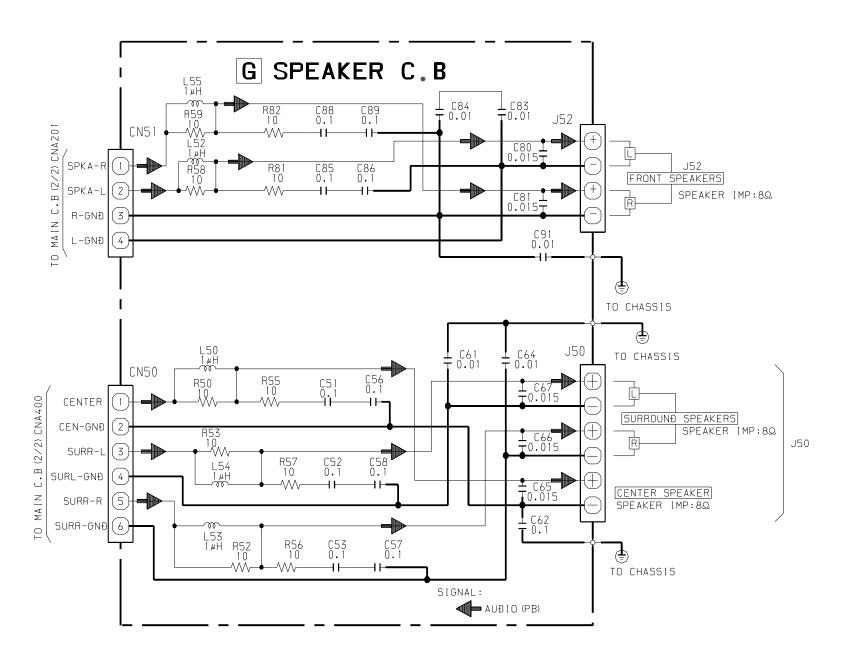


## G SPEAKER C.B

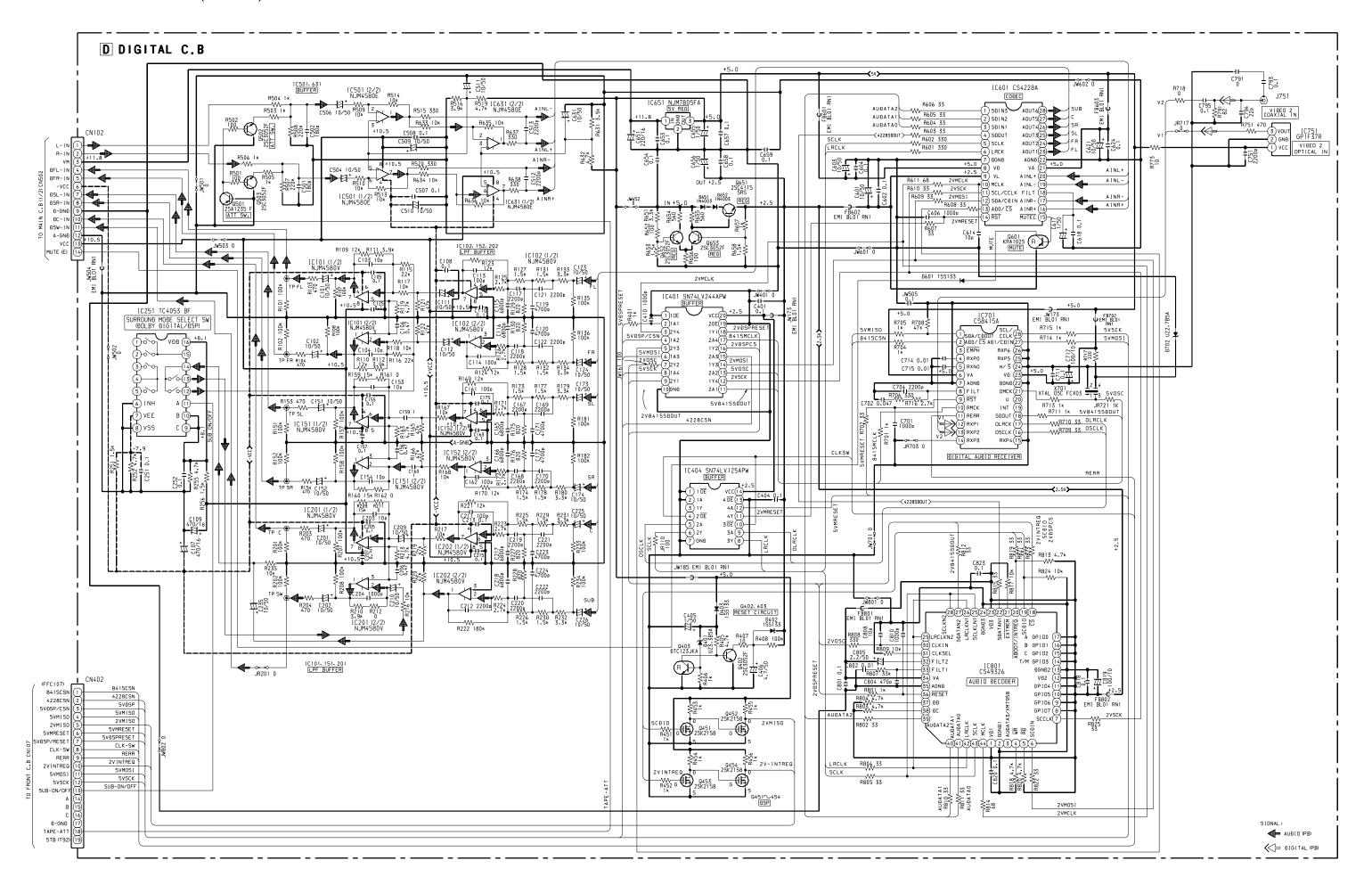








32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

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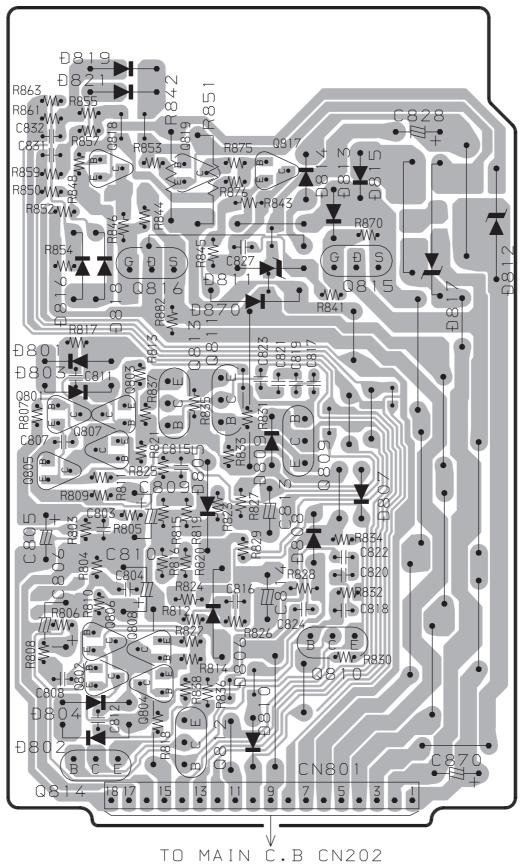
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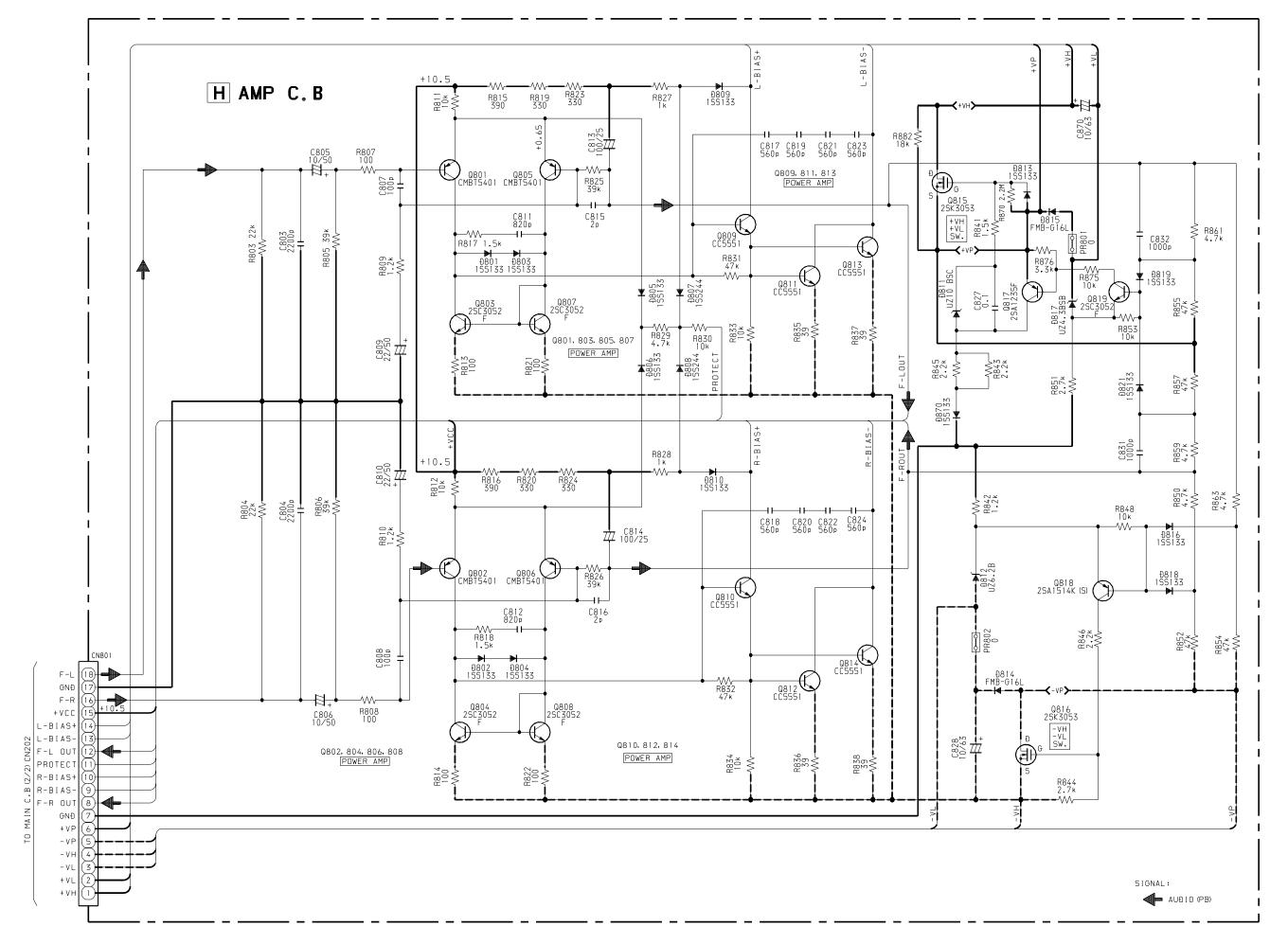
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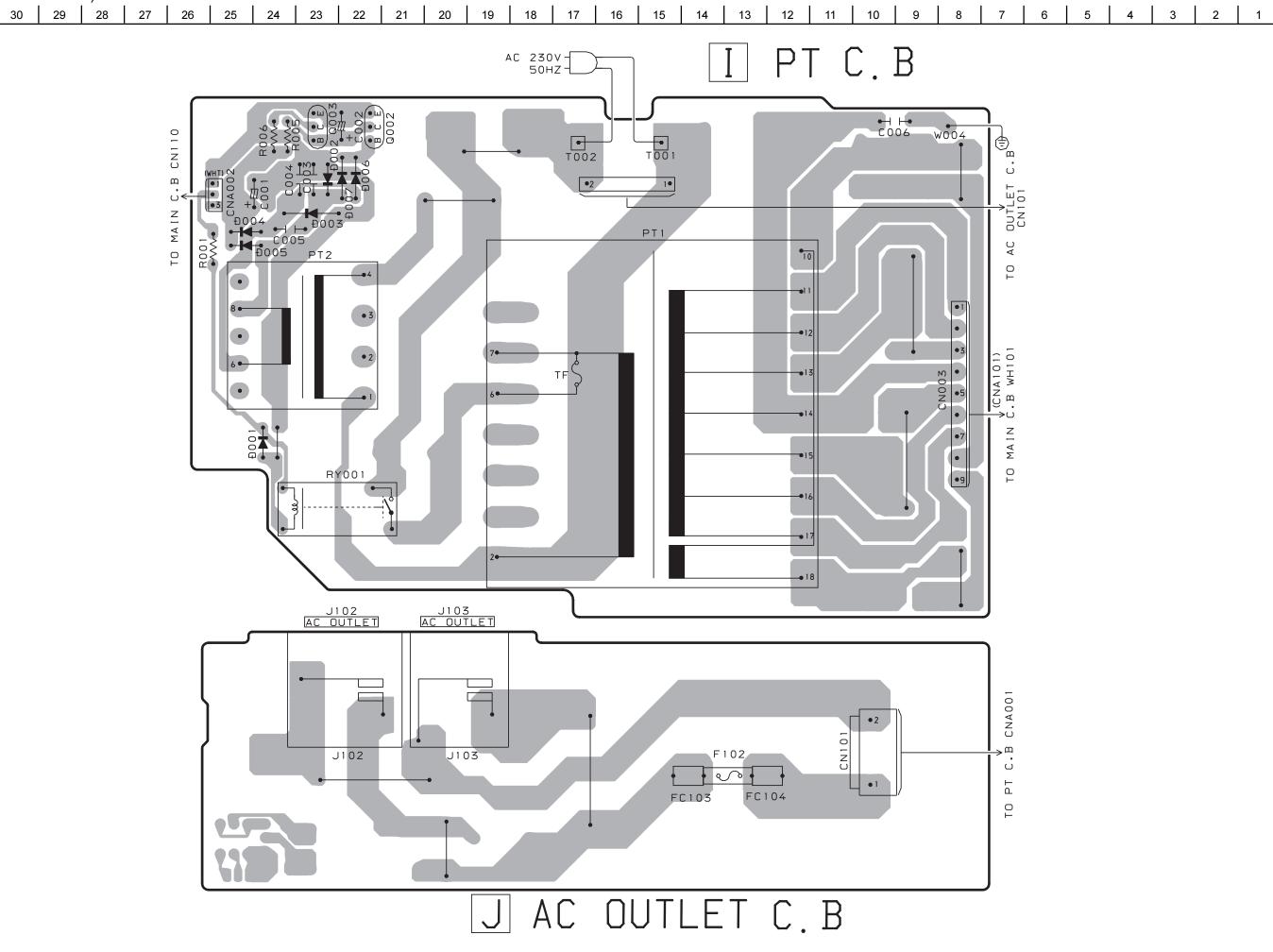
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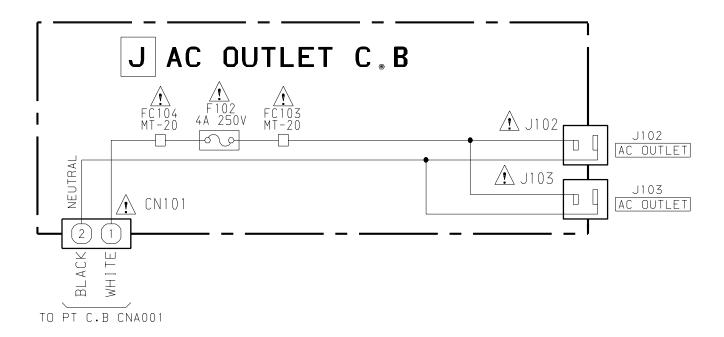
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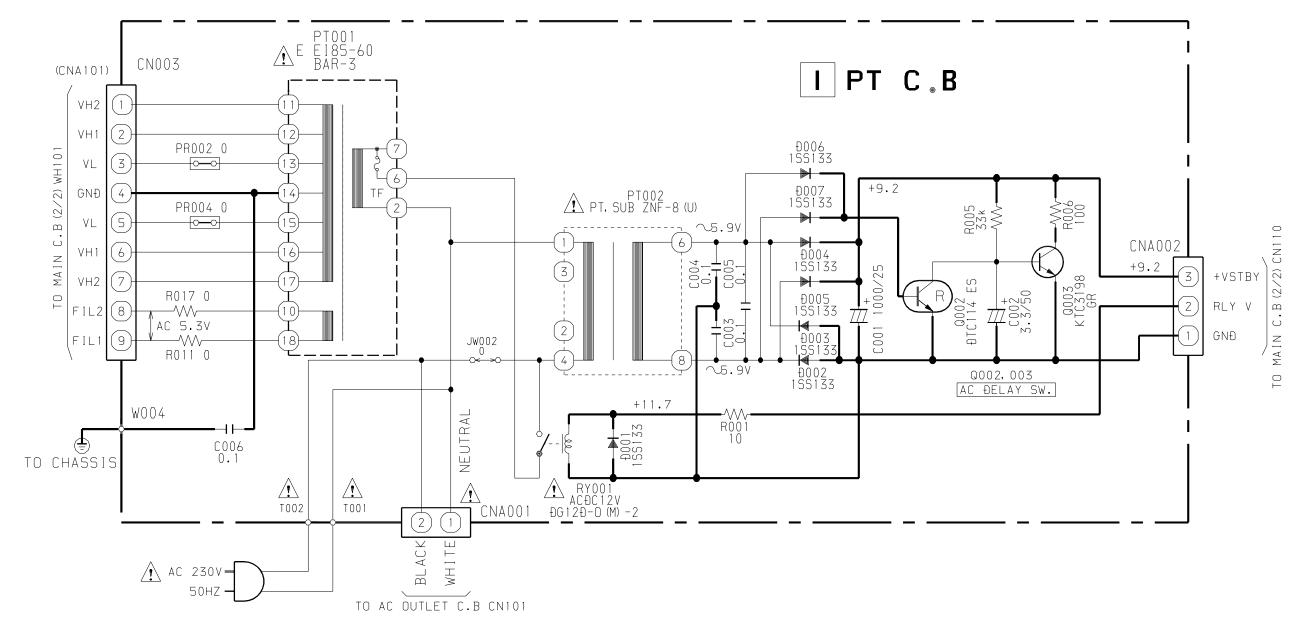








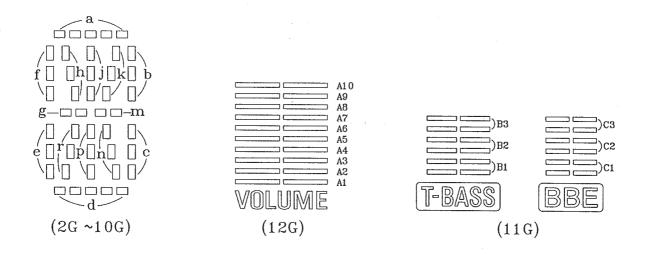




#### FL (HNA-12SM12 BAR-3) GRID ASSIGNMENT / ANODE CONNECTION

#### GRID ASSIGNMENT

1 G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
DOPRO LOGIC L C R DODIGITAL LFE dts 98kHz DSP LS S RS STEREO TONE (6) (2)	AUTO 000000 VF 00000 VF 00000	0 000 0	00000	00 0 0 0 00 0 0 0	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000 00000 00000 00000 00000 00000	00 0 fb 00 0 fb 00 0 fb 0 000 0 0 000 0	50500 01 0 00 0 0 0 0 0 0 0 0	ANALOG DIGITAL kHz == == MHz == == OVER == == LEVEL (T-BASS) (BBE)	5.1CH INPUT SOURCE DIRECT VOLUME SLEEP

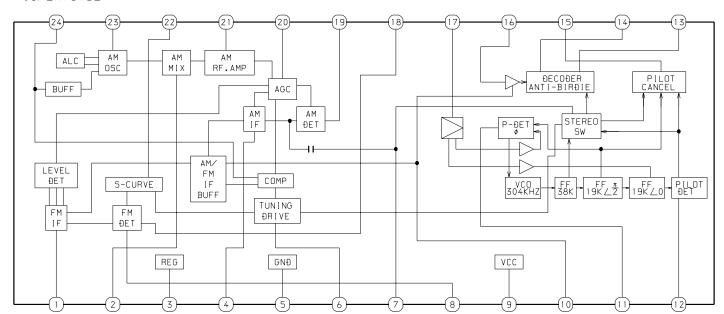


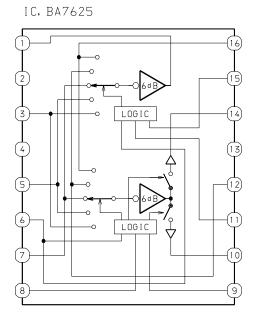
#### ANODE CONNECTION

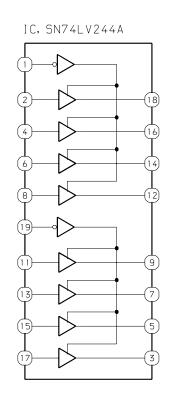
			T		γ							
	1 G	2G	3G	4 <i>G</i>	5G	6G	7 <i>G</i>	8G	9G	10G	11G	12G
P1		d	d	d	d	d	d	d	d	d	ANALOG	A1 0
P2	C	n	n	n	n	n	n	n	n	n	DIGITAL	A9
P3	R	p	p	p	p	p	p	p	p	p	kHz	A8
P4	LFE	r	r	r	r	r	r	r	r	r	MHz	A7
P5	LS	e	e	e	e	e	e	e	e	e		A6
P6	S	C	С	c	С	С	С	c	c	c	B1	A5
P7	RS	g	g	g	g	g	g	g	g	g	B2	A4
P8	STEREO	m	m	m	$\overline{m}$	m	m	$\overline{m}$	m	m	<i>B</i> 3	A3
P9	TONE	f	f	f	f	f	f	f	f	f	СЗ	A2
P10	dts	b	b	b	b	b	b	b	b	b	C2	A1
P11	ЬД	k	k	k	k	k	k	k	k	k	C1	VOLUME
P12	( (A) )	j	j	j	j	j	j	j	j	j	(BBE)	SLEEP
P13	((b))	h	h	h	h	h	h	h	h	h	(T-BASS)	
P14	DSP	а	а	а	а	а	а	а	а	а		
P15	96kHz	AUTO	MONO		(((@1))		RDS	○(U)	EON		OVER LEVEL	SOURCE DIRECT
P16	Didpro logic	VF						○ (L)			Balla U Balle	5.1CH INPUT
P17	DIODIGITAL	D						AG				(1140 @ 0)

#### IC BLOCK DIAGRAM

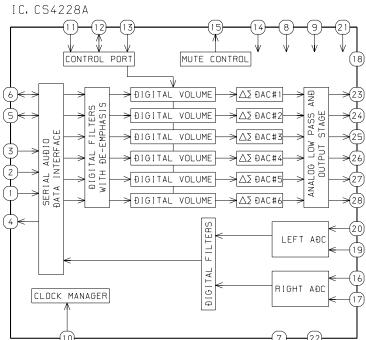
#### IC, LA1845L

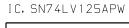


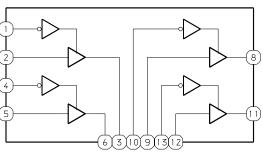




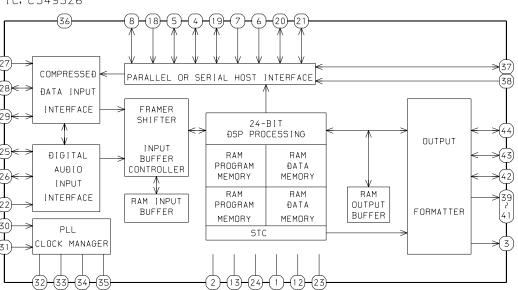




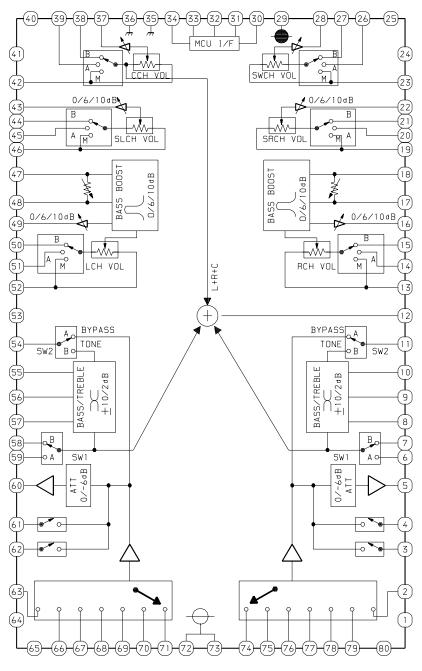




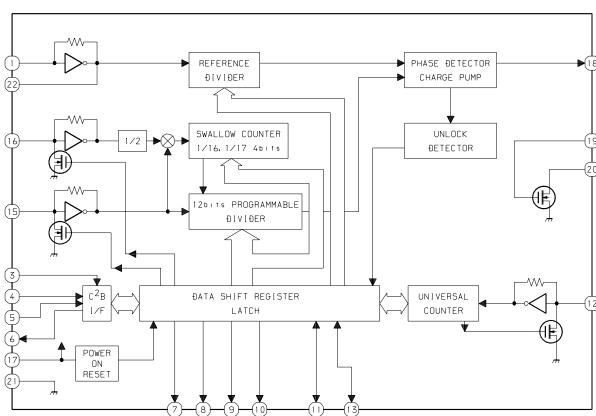
#### IC, CS49326



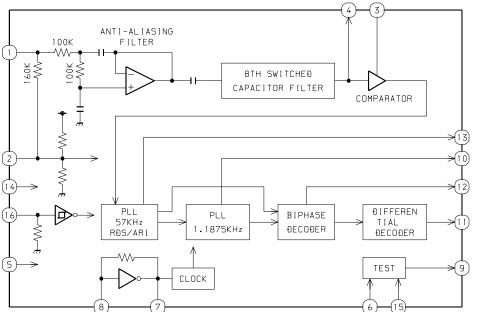
#### IC, M61501FP

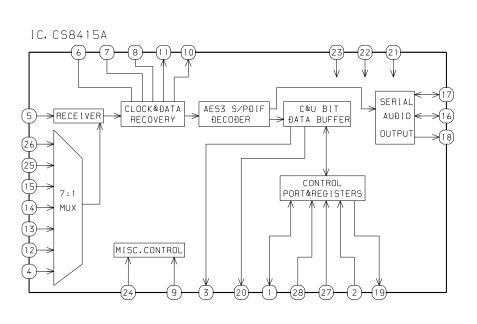


#### IC, LC72131Ð-N



#### IC, BU1920FS





### IC DESCRIPTION IC, UPD780228GF-084

Pin No.	Pin Name	I/O	Description
1	O-K-SCAN	О	Switch scan timing output.
2	TUNER ON	О	Tuner ON/OFF output.
3	O-DATA(M)	О	Data output for sound.
4	С	-	Connected to a pulled up resistor.
5	O-STB(M)	О	Latch strobe output for sound control.
6	O-MUTE	О	System mute ON/OFF output
7	O-CLK (M)	О	Clock output.
8	I-TM-BASE	I	Time-base single input.
9	O-POWER	О	System power supply $\overline{\text{ON}}/\text{OFF}$ output.
10	O-5VMRESET	О	Reset output for IC, CS8415A.
11	O-5VDSP/RESET	О	Reset output for IC, CS49326.
12	Ī-MIC	-	Connected to a pulled up resistor.
13	O-5VDSP/CSN	О	Chip select output for IC, CS49326.
14	O-5VMOSI	О	Serial control data for IC, CS4228A.
15	O-2VMISO(MISO)/	0	Serial control data output for IC, CS49326.
	SUR-MUTE	O	Serial control data output for IC, CS49320.
16	O-5VSCK/C-MUTE	О	Clock serial control output for IC, CS4228A.
17	IC	-	Connected to GND.
18	VSS	-	GND.
19	VDD+5V	-	Power supply input.
20	O-2VINTRQ	О	Control port interrupt request output for IC, CSA9326
21	O-CLK-SW	О	Pre-emphasis output for IC, CS8415A.
22	I-RDS-DATA	I	RDS serial data input.
23	O-5VMISO	О	Serial control data output for IC, CS8415A.
24	A	-	Connected to a pulled up resistor.
25	O-MCU/B	-	Connected to a pulled up resistor.
26	O-8415CSN	О	Chip select output for IC, CS8415A.
27	O-4228CSN	О	Chip select output for IC, CS4228A.
28	I-RDS-CLK	I	RDS clock input.
29	RERR	О	Receiver error output for IC, CS8415A.
30	RESET	I	Reset input.
31	O-PLL-CE	О	PLL IC chip enable output for IC, LC72131D-N.
32	O-TAPE-ATT	О	ATT output for function tape.
33	O-STB (MIC)	-	Not used.
34	I-RMC	I	System remote control signal input.
35	O-STB (T92)	-	Connected to a pulled down resistor.
36	C-SHIFT	О	Micon clock shift output.
37	VDD1	-	Power supply input.
38,39	X2,X1	-	4.19 MHz oscillator circuit.
40	VSS1	-	GND.
41	AVDD	-	Power supply input.

Pin No.	Pin Name	I/O	Description
42	HOLD	I	Power failure detected input "L" to stop and hold memory.
43	I-RE-VOL	I	Volume rotary encoder signal input (Main vol L & R).
44	RDS-SIG	I	RDS signal level input.
45	I-JOG2	I	Multi jog rotary encoder signal input.
46	I-FU-JOG1	I	Function rotary encoder signal input.
47,48	I-KEY2,1	I	Key input (A/D).
49	I-TUNE/IFC	I	Tune-IF count serial data input.
50	AVSS	-	GND.
51,52	BBE1,2	0	BBE boost level control signal output.
53	TAPE-MON	0	Tape monitor control signal output.
54	ECO	О	ECO LED ON/OFF output.
55,56	AV-B,A	О	VIDEO - SW control signal output.
57	SW-RELAY	0	Relay switch ON/OFF output.
58	SUB ON/OFF	О	Sub-woofer ON/OFF output.
59	NC	-	Connected to GND through a resistor.
60	VIDEO1	О	VIDEO1 LED ON/OFF output.
61	VIDEO2	О	VIDEO2 LED ON/OFF output.
62	VIDEO3	О	VIDEO3 LED ON/OFF output.
63	I-HP-MUTE	I	Headphone mute detected input.
64	CD	О	CD LED ON/OFF output.
65	ĀUX	О	AUX LED ON/OFF output.
66	TAPE-MON	О	TAPE MONITOR LED ON/OFF output.
67	TUNER	О	TUNER LED ON/OFF output.
68	PHONO	О	PHONO LED ON/OFF output.
69	I-STEREO	I	Tuner stereo detected input.
70~72	P1~P3	О	FL segement P1~P3 output.
73	LW/P4	I/O	LW data input to diode / FL segement P4 output.
74	RDS/P5	I/O	RDS data input to diode / FL segement P5 output.
75	BBE/P6	I/O	BBE data input to diode (Not used) / FL segement P6 output.
76	AMST/WIDE/P7	I/O	AM stereo, wide band data input to diode (Not used) / FL segement P7 output.
77	AM10K/P8	I/O	AM10K data input to diode (Not used) / FL segement P8 output.
78	KARAOKE/P9	I/O	KARAOKE data input to diode (Not used) / FL segement P9 output.
79	VDD2	-	Power supply input.
80	-VFL	-	Power supply input for FL display.
81~88	P10~P17	О	FL segment P10~P17 output.
89~100	G12~G1	О	FL grid G12~G1 output.

#### ADJUSTMENT <TUNER / FRONT>

#### < TUNER SECTION >

1. Clock frequency Check

Settings: • Test point: TP2 (CLK)

Method: Set to MW 1602kHz and check that the test point is

 $2052kHz \pm 45Hz$ .

2. MW VT Check

Settings: • Test point: TP1 (VT)

Method: Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the

test point is more than 0.6V.

3. MW Tracking Adjustment

Settings: • Test point: TP8(Rch), TP9(Lch)

• Adjustment location :

L951(1/3) ......999kHz

Method : Set to MW 999kHz and adjust L951(1/3) so that the test

point is maximum.

4. AM IF Adjustment

Settings: • Test point: TP8(Rch), TP9(Lch)

• Adjustment location:

L802 ......450kHz

5. FM VT Adjustment

Settings: • Test point: TP1(VT)

• Adjustment location: L907

Method : Set to FM 108.0MHz and adjust L907 so that the test point becomes 7.0V  $\pm$  0.05V. Then set to FM 87.5MHz

and check that the test point is more than 0.5V.

6. LW VT Adjustment

Settings: • Test point: TP1(VT)

• Adjustment location: L942

Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V  $\pm$  0.05V. Then set to LW 290kHz

and check that the test point is less than 8.0V.

7. FM Tracking Adjustment

Settings: • Test point: TP8(Rch), TP9(Lch)

• Adjustment location : L901,902,904,905

Method: Set to FM 98.0MHz and adjust L901,902,904,905 so

that test point is maximum and distortion is minimum.

8. FM Tracking Check

Settings: • Test point: TP8(Rch), TP9(Lch)

Method: Set to FM 98.0MHz and check that the test point is

less than 13dBµV.

9. LW Tracking Adjustment

Settings: • Test point: TP8(Rch), TP9(Lch)

• Adjustment location :

Method: Set up TC942 to center before adjustment. The level at

144kHz is adjusted to maximum by L941. Then the level

at 290kHz is adjusted to maximum by TC942.

10. DC Balance / Mono Distortion Adjustment

Settings: • Test point: TP3, TP4 (DC Balance)

: TP8(Rch), TP9(Lch) (Distortion)

• Adjustment location: L801

• Input level : 60dBµV

Method: Set to FM 98.0MHz and adjust L801 so that the

voltage between TP3 and TP4 becomes  $0V \pm 0.5V$ 

with distortion less than 1.3%.

11. Output Level Check

<MW>

Settings: • Test point: TP8(Rch), TP9(Lch)

• Input level :  $74dB\mu V$ 

Method: Set to MW 999kHz and check that test point is

 $55\text{mV} \pm 3\text{dB}$ .

<FM>

Settings: • Test point: TP8(Rch), TP9(Lch)

• Input level :  $60dB\mu V$ 

Method: Set to FM 98.0MHz and check that test point is

 $270\text{mV} \pm 3\text{dB}$ .

#### < FRONT SECTION >

1. µ-CON OSC Adjustment

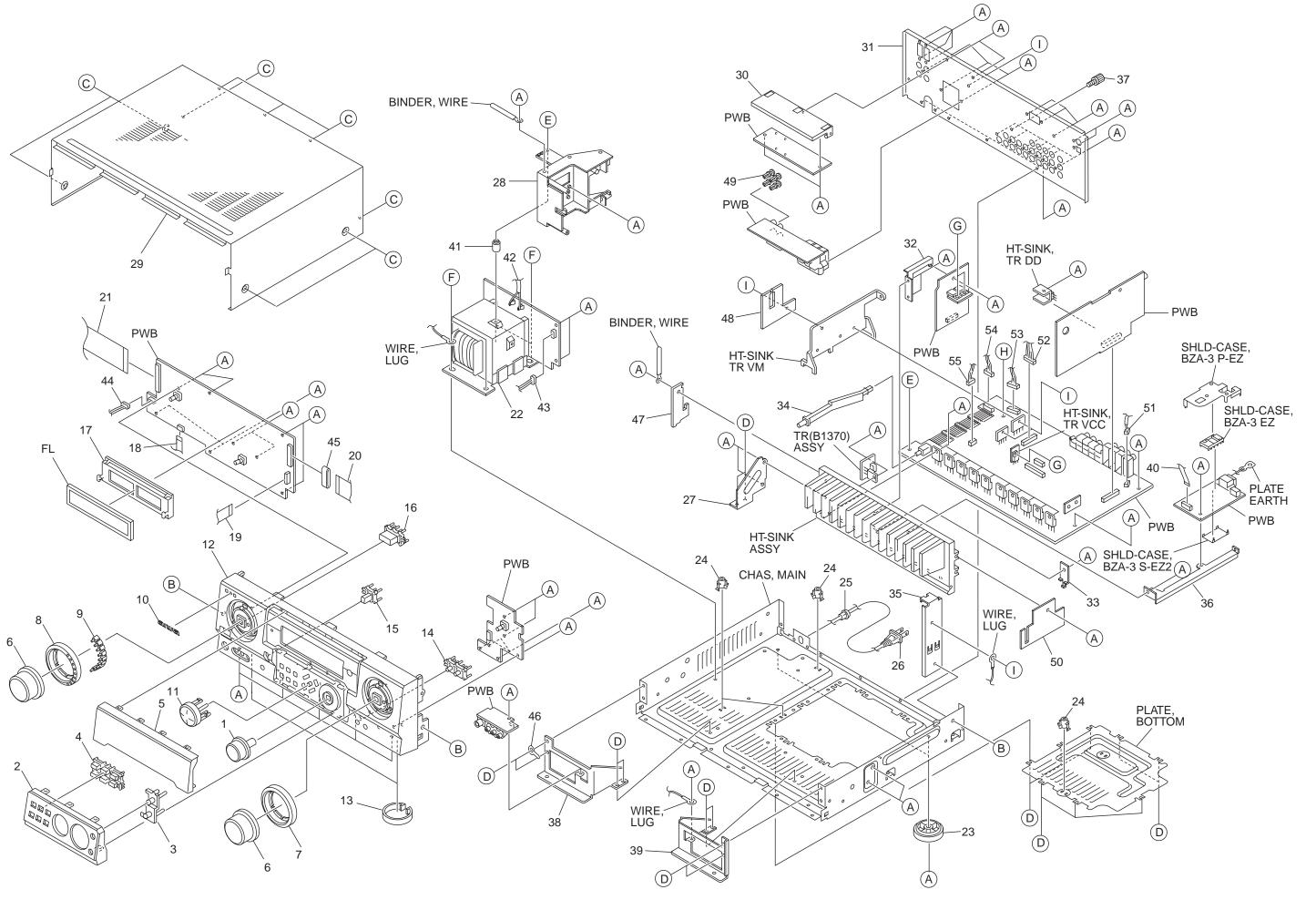
Settings: • Test point: TP1 (O-K-SCAN) and GND

• Adjustment location : L101

 $\label{eq:Method: Insert AC plug while pressing TUNER function key.}$ 

Adjust L101 so that the frequency at the test point is

78.52Hz  $\pm 0.08$ Hz (12.723ms  $\sim 12.749$ ms).



#### MECHANICAL PARTS LIST 1/1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANR NO.	I DESCRIPTION
	8B-AR1-065-0	10	KNOB, RTRY JOG		8B-AR3-219	-010	HLDR, PWB TUNER 3
	8B-AR3-032-0 8B-AR1-060-0		PANEL, FR EZ KEY, ENTER		87-033-209		
			KEY, T-BASS 3EZ	30	8B-AR1-200	7-010	HLDR,SIDE L HLDR,SIDE R
	8B-AR3-001-0		WINDOW, DISP DD RDS	40	88-912-131	-110	FF-CABLE, 12P 1.25 130MM
6	8A-AR3-045-1	1.0	KNOB, RTRY VOL	<i>4</i> 1	8B-AR1-216	-010	HLDR,P/T H8.0
	8A-AR3-007-0		RING, VOL		8B-AR4-651		CONN ASSY, 2PAC-OUTLET
	8A-AR3-047-0		RING, FUN		88-805-033		CONN ASSY, 3P 300
	8A-AR3-009-0		REFLECTOR, FUN		88-805-036		CONN ASSY, 3P
	87-CE3-023-0		BADGE, AIWA 30N SILV		87-A90-762		F-BEAD, 3407MFT
11	8B-AR1-055-0	10	KEY, SOUND	46	87-450-414	-010	TERMINAL, LB4 NI
	8B-AR3-022-0		CABI, FR EZ		8B-AR1-618		
	8Z-AR1-020-1		RING, FOOT SIL		8B-AR1-619		
	8A-AR3-024-0		KEY, BAL	49	8B-AR3-218	3-010	RIVET, NYL 3.4-5.7
	8A-AR3-020-0		KEY, ECO		8B-AR1-617		PWB, FFC1 BAR-1
16	8B-AR1-001-0	10	KEY, POWER	51	8B-AR3-648	3-110	CONN ASSY, 2P-VIDEO3
17	8B-AR1-211-0	10	KEY,POWER GUIDE,FL 150-25 FF-CABLE, 8P 1.25 10MM	52	8A-AR3-654	-010	CONN ASSY, 9P VH
18	88-908-101-1	10	FF-CABLE, 8P 1.25 10MM	53	8B-AR1-660	-010	CONN ASSY, 6P VH (BAR)
19	88-906-061-1	10	FF-CABLE, 6P 1.25 60MM		8B-AR3-665		CONN ASSY, 4P VH (BAR)
	88-919-331-1		FF-CABLE,19P 1.25 330MM		8Z-NFT-604		CONN ASSY, 3P SURR
, 21	88-930-441-1	10	FF-CABLE,30P 1.25 440MM	А	87-067-703	-010	TAPPING SCREW, BVT2+3-10
<u> </u>	8B-AR3-625-0	10	PT,E EI85-60 BAR-3	В	87-721-095	-410	QT2+3-8GLD W/O SLOT
23	8B-AR1-003-0	10	FOOT, RAER BLK	C	87-067-641	-010	UTT2+3-8(W/O SLOT)BL
24	88-AR1-218-0	10	HLDR, PWB H8.9	D	87-067-584	-010	TAPPING SCREW, BVT2+3-6
25	87-085-185-0	10	BUSHING, AC CORD (E)		87-067-581		TAPPING SCREW, BVT2+3-15
<u> </u>	87-A80-092-0	10	AC CORD ASSY,E BLK SUN FAI	F	87-078-200	-010	S-SCREW, ITC+4-8 R
27	8B-AR1-206-0	10	HLDR, HT-SINK	G	87-067-579	-010	TAPPING SCREW, BVT2+3-8
28	8B-AR1-217-0	10	HLDR, SUB P/T	Н	87-067-632	-010	TAPPING SCREW, BVT2+3-15
29	8B-AR2-045-1		CABI, STEEL	I	87-067-958	-010	BVTT+3-10
30	8B-AR1-214-1	10	HLDR, PWB AC-OUTLET				
31	8B-AR3-042-1	10	PANEL, REAR EZBM				
32	8B-AR1-215-1	10	HLDR, PWB F AMP				
33	8B-AR1-209-0		HLDR, PWB MAIN				
34	8B-AR1-006-0	10	BTN, SP				
	8B-AR1-205-1		HLDR, PWB DD				

#### COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
В	Black	С	Cream	D	Orange
G	Green	Н	Gray	L	Blue
LT	Transparent Blue	N	Gold	Р	Pink
R	Red	S	Silver	ST	Titan Silver
Т	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray

#### ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTIO	N
1	8B-AR3-906-010	IB,EZ(91	L) M	
2	87-006-226-010	ANT, LOO	P AM	
3	87-A90-118-010	ANT, WIR	E FM(Z)	
4	8A-AR2-701-110	RC UNIT	RC-AAR02	BLK

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表) **AIWA CO., LTD.** 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111 9620450 921338 Printed in Singapore